Gleanings in Bee Culture

Created to help beekeepers succeed

December, 1951 - - Vol. 79, No. 12

Bees on Wheels in Australia

By Edward Samuel, Sidney, Australia

Modern homestead at Kellyville, New South Wales, and some of the home hives belonging to Australian migratory bee farmer, H. Darrell. Situated at the foot of the Blue Mountains, the Darrell home is in typical Australian bush country, surrounded by tall gum trees, which are the source of most of Australia's honey.—Australian Official Photo.— J. Band.

Until the sugar shortage caused by World War II and the general food position and world shortage, Australians had been comparatively small consumers of one of nature's most precious gifts — honey — and only lately has this important industry begun to really come into its own.

Migratory bee farming is rapidly expanding Australian honey production. Since apiarists began to follow the honey flows and set down hives for only as long as the bees found plenty of blossoms to work on, there has been a vast increase in the honey yield. Figures show that from 15,947,952 pounds in 1943-'44, Australian honey production had grown to 32,000,000 pounds in 1947-'48. Motor traction, mobile extraction units, and labor saving appliances have all combined to increase the farmer's production and to make

The honey house at the Darrell homestead.—Australian Official Photo.—J. Band.

work less arduous. Many apiarists who could previously handle only from 150 to 200 colonies of bees find that they can now operate between 600 and 700 hives.

There is plenty of color in the life of the nomad beemen who follow the blossoms through coastal river districts, the foothills and valleys of the mountain ranges, and along the inland river valleys for nine months of the year. Some apiarists move only around their own districts, but many migratory beekeepers travel up to 500 miles from their home bases during the nine working months of the year, and farmers on a big scale have "stands" of hives in three states, hundreds of miles apart, at the one time.

Large Scale Migratory Beekeeping

In the winter of 1947, some New South Wales men decided to move their entire establishments of 1600 hives over 2000 miles across the Australian continent to virgin country in the south of Western Australia. That was probably the longest honey-hunting migration ever attempted, and is an indication of the degree to which hive transport technique has been developed.

The convoy, with its lorries and caravans, was over twelve months on the journey, and caused great excitement in country towns on the way. These men have now settled at Manjimup, Western Australia, where they have a million acres of karri forests abounding in eucalypt blossom and wild flowers in which to "graze" their bees.

Another Western Australian apiarist, an airman from World War II, uses a light plane to spot likely honey flows in forest country, and to plot the easiest tracks into the blossom. He flies scout hives into country that looks good from the air, and if these scouts show a good honey flow, moves his colonies in by truck.

To start in the industry a man needs an acre or two of land to use as a base, a good shed, a motor truck, portable honey extracting

Close up of mobile honey extracting unit. The windows are protected with fine wire gauze to keep out bees, which otherwise would be a nuisance during processing. Stray bees are shepherded towards narrow slits at the top of the window frames through which they eagerly escape. The outlets are so made that the bees cannot get back. Power for the rotary extractor is supplied by a single-cylinder 1-h.p. petrol motor. Steam for the decapping knife comes from a boiler outside the portable honey house.—Australian Official Photo.—J. Band.

outfit, honey tanks, and wax press. It will cost him about £A1,000 to buy 200 well-hived colonies of bees, a second-hand truck and honey-house equipment. But many have succeeded from more modest beginnings by buying a few hives, costing about £A3 each and outlaying, say, £25 on honey-house equipment. These men usually do casual labor until they become firmly established.

High Per Colony Yields

A good migratory apiarist should get an average yield of about 250 pounds of honey from each colony in each season. In a good year production up to 360 pounds from each hive is not uncommon. Competent men working a group of 250 hives can earn as much as £A3,000 in a three-month season, while even the comparatively inexperienced are making more than £A1,000 a year working between 130 and 160 hives.

Australia is fortunate in that the main honey-producing flora, the native eucalypts, of which there are over 600 varieties, flower in different districts in different times of the year. Bee farmers, therefore, have a continuity of blossom supply from early spring through summer to autumn. Most of the eucalypts produce a light, clear honey, with good body and mild flavor. Particularly good are yellow box (**Eucalyptus melliodora**), white box (**E. albens**), and the ironbark varieties (**E. paniculata, sideroxylon,** and **siderophloia**). Honey from trees such as the blue gum (**E. saligna**), spotted gum (**E. maculosa**), and the coastal tea-tree, not a eucalypt (**melaleuca spp**) is darker in color and has a stronger flavor. Useful yields of honey are also given by the blooms of white clover, lucerne, and orange trees,

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Out on location, Darrell has set down 70 hives in a picturesque clearing in citrus country at Wilberforce, about ten miles from the homestead. The honey from orange trees has a pleasant and characteristic bouquet and flavor. Simultaneously, Mr. Darrell had another out-apiary a few miles away in the same area. Landholders are most co-operative, and mostly do not charge for use of a location. However, Mr. Darrell sees that they do not go short of good honey for the family table. In the background is Darrell's portable honey house.—Australian Official Photo.—J. Band.

Inside view of the mobile honey house. Mrs. Darrell is working the rotary extractor (Australian-made, by Pender Bros., of West Maitland, N.S.W.) Mr. Darrell is using the steam-heated knife used to remove wax cappings from the combs before they go into the rotary extractor.—Australian Official Photo.—J. Band.

Bees are nearly always moved at night unless the weather is very cool. In changing locations, trips of 250 miles are made over night. There is no upset in the routine of the colony, and the workers go right on with the job the next morning. The most favored bees for commercial use are the golden Italian, leather Italian, and Carniolan.

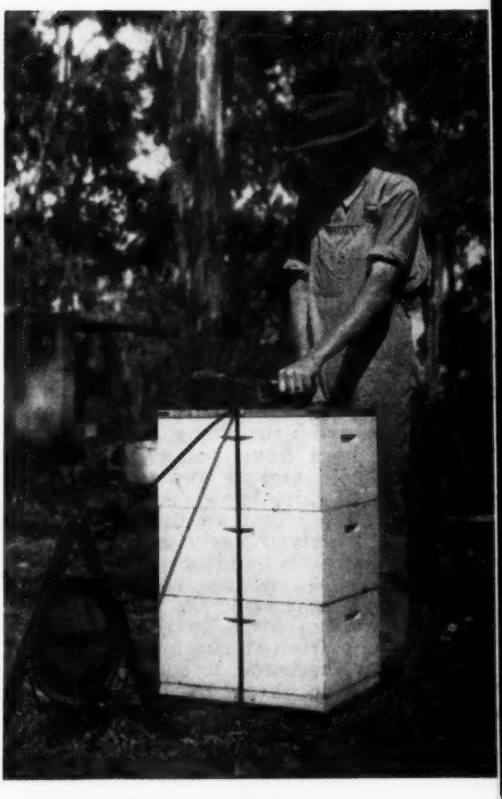
Enemies of Bees

The beekeeper's life is not, of course, without its problems, and apiarists have to watch out for pests and disease. Ants cause a good deal of trouble. When a hard-working, but tired bee, returning to the hive overladen with honey on her third or fourth trip for the day, cannot get into the hive at the first attempt, she drops on the ground to get her second wind, and there the ants attack her. The remedy is to strew a deadly acid called, commercially, Cyanogas, on all ant beds near the hives and plug the ant hole with putty. Fumes from the Cyanogas kill the surface ants instantly, and those beneath the ground are suffocated.

Giant toads brought into Queensland in 1935 to control the greyback beetle in the canefields, have caused some anxiety to local beekeepers. The toads, which are from six to eight inches long, and four or five inches across, visit the hives towards nightfall and lap up bees from the entrance, sometimes eating 300 at a meal. To protect their colonies, apiarists put the hives on stakes, or build netting barriers around them.

The different Australian States have legislation designed to control disease, protect apiaries from unfair interference from migratory beekeepers and to register those engaged in the industry and their equipment. All hives have to be registered annually, and one in each colony branded with a registered number for identification purposes. In most States notification of the movements of bees from one district to another must be given, and the bees kept in soundly constructed frame hives, with combs that allow ready removal for inspection and for disease control.

An important factor contributing to the success of the migratory beekeeper in Australia is that the eucalypts which produce the most important honey flows begin to form buds twelve months before they flower. This gives apiarists plenty of time to select good sites for their hives. The heaviest flowerings do not, however, necessarily produce the best honey flows, and officers of the Australian Council for Scientific and Industrial Research are cooperating with beekeepers in an endeavor to find some means of assessing probable nectar secretions in the blossoms while trees are in the budding stage. A theory has been developed that the amount of starch in the sap wood of eucalypts is related to the honey flow. If this is established, small borings of sapwood, tested with iodine for starch, may provide a reliable guide to honey flow prospects when the trees come into flower.



Sectionalized hives are kept intact during transport by rigid steel strapping, which effectually imprisons the bees until they arrive at a new location. The whole 70 hives (which is the usual size of a mobile honey-gathering unit) can be loaded on to a 3-ton lorry.—Australian Official Photo. —J. Band.

Lotus Honey of India

By R. N. Muttoo, Ramgarh, India

In my article on "Beekeeping in India" published in your esteemed magazine for January 1951, I find a curious error has crept in at page 16, column 2, paragraph 2. I am made to say that the so-called "Lotus Honey" is being sold in India "at the fabulous price of 25 S. per lb." Actually, I had said, or at least had meant to say, that this product is being sold at £ 25/- per lb. or say at about 50 Dollars per pound. It is sold in phials of one dram each at about 2s. to 3s. per phial.

The producers and dealers in this "Lotus Honey" have been challenged by me to state the source of their honey, but they have taken little notice of these challenges, because there is no law in my country which can be invoked against them. One thing is clear: "Lotus" is not a brand name for many different firms produce and market stuff labeled as "Lotus Honey".

I wonder if any other country in the world can equal this tale about the price which a substance labeled as Honey fetches in India.

Supplementary Heat for Wintering Bees as Used in the Fraser Valley of British Columbia

By F. L. Crawford, Agassiz, B. C., Canada

The mild winters in the Fraser Valley with cold spells of short duration offer an opportunity to use supplementary heat to good advantage in the wintering of bees. In the majority of winters dampness is the biggest problem but the cold spells of usually about seven days' duration, when the temperature drops below freezing and sometimes to zero, are a problem. In many cases the bees have not clustered until the cold arrives and may have begun to raise brood, as was the case in 1951 when an unexpected cold spell arrived early in March with temperatures down to 14°. This causes excessive consumption of stores to provide the necessary heat and often leads to the loss of the colony from starvation.

To overcome, to some extent, this condition, heat by means of 100-watt lamps, one to each hive, individually controlled by thermostats, set at 45°F., were supplied all hives from November 15 to March 15. The consumption of electricity was as shown in Table 1.

Mr. Crawford shows the equipment he uses for supplementary heat.

The cost of power is 2c per KWH.

Heat had been supplied in 1947 with all hives controlled from one thermostat. This was abandoned in 1948 in favor of individual thermostats. It was found that hives stronger than the control hive received heat when they were not needing it and similarly hives weaker than the control did not get heat when they required it.

The use by the bees of heat is presented in Table 2, showing the amount in KWH used in each month from November 15 to March 15, also the lowest temperature and the number of days when the temperature was 32° or lower.

Table 1:

Year	No. of Hives	KWH used	Remarks
1950	8	214	One hive died of starvation—failure of lamp.
1951	8	140	Strong to very strong, while unheated hives were weak to medium.

No data is available after March 15 as the thermostats are raised to 80° and all hives fed syrup and pollen to build up for pollination of tree fruits. It has been noted that little heat is used after the dandelion bloom and the power can be cut off until the bees are put down for winter.

The heaters can be used to good advantage to build up weak stocks, nuclei, or to make increase. I have had good results by using heat on the queenless part of a division, and have not had to give this part any extra bees or confine the bees to keep the field bees in their new home. The heat takes care of the

Table 2:

Month	KWH used		Lowest Temperature		No. of days 32°F. or lower	
	1950	1951	1950	1951	1950	1951
Nov.	-	-	40	23	0	4
Dec.	-	71	12	30	18	6
Jan.	88	24	-2	8	31	16
Feb.	106	33	5	19	11	16
Mar.	20	12	27	14	5	12

brood until enough has hatched to care for it. A new queen can be safely introduced or this division can raise a queen for themselves. I usually let them raise a queen and after the white clover flow is over and the supers removed, unite back to the parent colony and my requeening is taken care of.

Homemade Hive Heaters

The heater consists of a standard floor board and a box the same size as a shallow super with a bottom nailed on. The floor board is prepared by cutting a slot at the back 1" by 5" and covering with screen wire and putting on a strip to close the entrance not in use. The box has a hole 1" in diameter at the back of one side. This provides a cold air intake and when the air is warmed by the 100-watt lamp the hot air rises through the slot in the bottom to heat the hive body. The picture shows the assembly—the white sheets are asbestos paper as a fire preventive. The thermostat is connected into the wiring close to the porcelain receptacle and the thermostat itself goes into the feed hole of the inner cover. This will take care of one, two, or three storied hives.

All my heaters are made out of scrap lumber or old equipment that is of no further use for the bees. The fittings were obtained from a rewiring job and cost the labor of dismantling only. The only cash outlay was for the thermostats.

Propolis - It's Useful

By Hubert L. Benedict, Buenos Aires, Argentine.

I have read quite a number of books and magazines on beekeeping, and they all point out the inconveniences that propolis causes. The only thing I can remember having seen said in its favor was a reference to its use in the manufacture of some kind of disinfectant.

I quite agree that it is a nuisance. It sticks the frames and hive bodies together, sticks the inner cover to the hive body, and so forth, but I have discovered that it has its uses as well.

When I started beekeeping a few years ago I industriously scraped off all the propolis I could whenever I opened my hives and, not knowing what else to do with it, I just stuck it all together and, after a while, had a chunk of it about the size of a golf ball.

Then one day I needed to stick something together—I forget what it was now—and, not having anything else handy, suddenly thought of propolis. I fetched my ball of it, pulled a bit off, warmed it up and did my sticking job. It was a success!

Since then I have used propolis for all sorts of jobs. The beauty of it is, is that it sticks to anything—just melt it a bit first and it will cling like a leech to wood, metal, glass, or whatever else you try it on.

I have used it to mend a crack in the roof, to make a temporary repair of a water tank, to plug a hole before replacing a screw, to stop a loose part rattling on a bicycle, and for the hundred and one sticking jobs that are always cropping up in a household.

I never throw it away, and find that the product of a couple of hives is not sufficient to cope with my requirements. If people got wise to it, I wonder if the sale of propolis in sticks, like sealing-wax, could be a commercial proposition. I leave that to the big scale beekeepers.

Note: [We understand that in parts of Europe propolis is being used as one of the ingredients in a salve used for cuts and sores. It is said to have curative qualities. Some day we may be saving propolis instead of throwing it away.—Ed.]

"How Much Are You Paying for a 'Horse' Today?"

By Clifford F. Muth, Sr., Cincinnati, Ohio

Actually if you had a horse to sell, you wouldn't expect to make a sale on a letter like that. Still, we receive hundreds of similar hazy letters about honey. There is so much more to be said about honey than a horse, so why not say it?

Not long ago a local beekeeper brought a small truck load of honey to us and said: "You have to buy my honey, or else". I was taken back by surprise at this sort of threat so I asked, "or else what?". He smiled and said, "Or else my wife and family will have a lot of honey to eat this winter".

This chat is intended to bring about better understanding between honey producers and honey packers. Now if you are a honey producer with a crop to sell, let's see how we can "do all right for ourselves". Now mind you, I did not say "how can we get the most for our honey". I said, "do all right for ourselves". Anyone contributing to the production, handling, packing, and merchandising, must in some way share in the profit or loss. If, anywhere along the line one party tries to hog all the gravy, there is dissatisfaction and a feeling that some one is being gypped, and rightfully so.

As a honey packer, here are a few basic suggestions, which if you will follow faithfully, you will benefit from year after year and never be in a position where you must sacrifice for lack of a ready buyer.

1. Attend meetings of beekeepers in your county or state. There you will meet other successful producers and exchange ideas on methods, markets, and prices and you are very likely to find honey buyers—get acquainted with them.

2. Look up your county agent and neighbor beekeepers—they are worth knowing and will often be of value.

3. Subscribe to **several** monthly bee journals and read them from cover to cover. You will be a better beekeeper. There, too, you will find advertisements of honey buyers. If in doubt of the advertisers' responsibility, write to the publisher of the bee journal and ask how long they have known them, how long have they been in business, or ask your local bank to get a "report" on them.

4. Buy a dozen or two of two-ounce **clear** glass bottles with protecting mailing cartons. Now pick out six or eight names of honey packers and send them samples of your honey. Don't ask them what they are paying for a "horse"—show them what you have to sell. If there are two or more grades of honey, send samples of each and tell them how it is packed, in 60 pound cans (new or used); in steel drums (open or closed head) or wooden barrels. Tell them how many cans or drums of each grade you have for sale. You have a selling job on your hands so let's do it right. Place a sticker on the glass and on the mailing tube with your name and address on each sticker and attach your letter to the **outside** of the mailing tube so they all reach the buyer's desk together. This is most important because hundreds of samples are received in a short time packed in shoe polish cans or Vick's salve (and the honey tastes like it), but the most important is that **your sample** arrives safe and sound and is not lost in the shuffle.

5. It often paves the way to make a good sale by stating how much you believe your honey should be worth, **but don't close the door.** Some adjustment may be necessary. If you have read your bee journals, attended bee meetings, and spoken to your neighbor beekeepers you should have a pretty good idea of the market value.

6. Remember well the lesson your father taught you—"You can't have your cake and eat it, too". I believe he meant that if you try to squeeze the last nickel out of a sale, sooner or later you will become involved with some one who is slicker than you are. Hitch your wagon to a good stout work horse and not to a sprinter.

I would like to have 1/1000th part of the money lost by beekeepers in the last 20 years where they were promised more for their honey by some "sprinter" who was going

to sell their honey for above market price and then pay the producer an extra dividend. If the market price went up they may have received a little extra; if things went down—bang, there goes the entire year's work at a total loss.

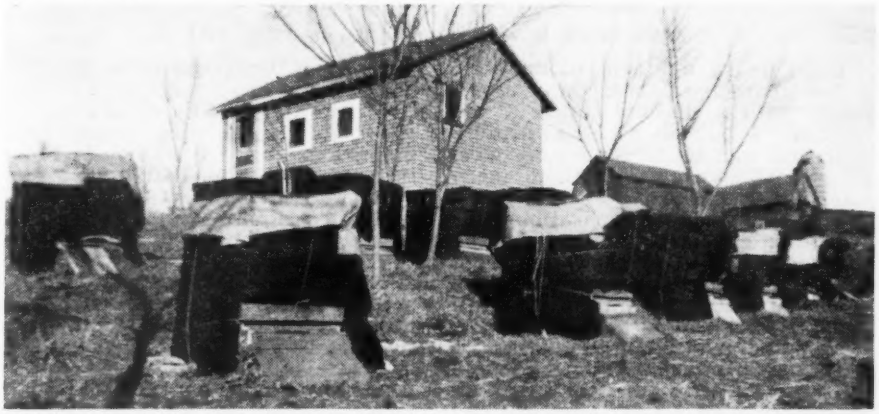
7. Don't be in a rush to sell your honey. As often happens after a good harvest, honey buyers are "filled up" for two or three months and a quick sale will have to suffer a special inducement price, where a month or two may be worth waiting for.

There is room for all in this grand country of ours to produce and market a mere three hundred million pounds of honey each year. When the honey producer and honey packer realize that through better understanding of each others' problems, a unity of cooperation can then open wide a more profitable field in the production and orderly marketing of honey for all—remember—don't sell a horse, sell your honey. It is a job, but a profitable one if you go about it right.

Bees Ready for Winter in Wisconsin

By W. A. Dagnan, Lynxville, Wis.

This is part of my bee yard facing east with corn fodder used as a windbreak on the north and east side of yard. There is a ridge on the north and south and west side of the valley so it is nice and warm in winter. All hives are winter packed with building fe't waterproof. I use clover hulling straw for packing material as it draws all the moisture and never freezes. This packing is three inches all around the hive and four inches on top.



This is a front view showing box-elder trees as shade, with a honey house and work shop in the rear. I plan to face all the hives to the South and pack with felt paper only. This way the sun will throw more heat on the hives.

Mr. Lund's apiary, which he calls "Big Bee Buzz Apiary", is trim and neat and well located for winter protection.

A Let-alone Hive

By Emil Lund, Vining, Minnesota

[This article was received in March, 1950.—Ed.]

I am trying out a let-alone hive. A few years ago I tried six or seven hives, with a shallow super at the bottom. I had an awful swarming year and had to do something with all my 90 hives, giving them more room all the time.

They all made preparations for swarming except the seven with the shallow super at the bottom which I did not do anything with; just gave them more super room and they all came through the season 100 percent with no attempt to swarm.

It was an unusual experience and ever since I have been for this non-swarming hive. Last year all my hives were equipped this way except one or two standard bodies. The honey came in so fast that I did not try them all out like before but instead, to get the most honey from them, I moved two frames of brood from the bottom body every ten days into the supers. Ordinarily, for a ten-frame standard hive ten days was too long. You would have to do it every week.

This way, when the hives are so equipped, a person would not have to look for queen cells except in the two combs in the super moved ten days previously. If queen cells are found it would be just the right time to start the top body with a new queen, either on top of an in-

On a beautiful country road an attractive sign like this is sure to bring a lot of customers.

ner cover or moved to one side.

This year, the 33 hives brought me four tons of honey—a 242 pound average—the biggest average I ever had and I have been in the business over 30 years. I did not requeen a year ago, and the bees superseded their queens, except possibly six packages I sent for. All were wintered in my cellar.

A year ago, 45 of my 50 colonies were equipped with the shallow supers on the bottom and they gave me 200 pounds average per colony. The years before the best average was about 150 pounds with ordinary hives.

This style of hive has some good points. The bees build their combs solid to the bottom bar and as most all the brood is in one good brood chamber the bees work up in the supers sooner.

When the weather gets warmer in the spring the queen goes down and lays some in the lower shallow chamber.

As an inducement, I use dark brood combs in the shallow supers with a little drone comb and with all the pollen that is deposited in the supers it helps to bring the queen down. This helps to prevent swarming, as the shallow combs are mostly free of honey and when the queen does lay in the bottom combs, she always goes back and takes care of the main brood chamber above.

[The main advantage of having a shallow super below each standard brood chamber is that this extra comb space below provides a place for bees to cluster after coming in from the fields. Also as Mr. Lund mentions, the super below provides comb space for the storage of pollen which is so essential for brood rearing. The late Dr. Miller used a slatted compartment just below the brood chamber for bees to cluster also to provide more ventilation.—Ed.]

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This American Foulbrood

By I. F. Miller, Overland Park, Kansas

AFB—the first time I saw those letters they didn't mean anything to me. Then as time progressed these letters became an obsession with me. Every time I opened a hive I could see or smell them. I had visions of burning every hive I had.

Now I am no longer afraid of AFB. Why? I'll tell you a few simple facts that you may like to know. All of this information can be verified through various publications available to you. I might suggest that you obtain a few of them and read them and then perhaps you, too, will no longer be afraid of the big bad AFB.

AFB is caused by **Bacillus larvae,** which attacks the brood in the digestive tracts of the grub. Sulfathiazole is now recognized as a preventive of this disease. Please note I said a preventive, not a cure. The germ develops within the grub in about three or four days of its growth. This sulfathiazole then is used much as hogs or other animals are inoculated against a disease. It is not a cure and hives with heavy infestation of AFB will still have to be destroyed. However, if they are treated in time this burning will be prevented.

Preparation of the treated sugar syrup is given by several manufacturers of the drug. There are two kinds, the powder and the pill. Not having too many hives I prefer the pill; however, larger users will prefer the powder. Simply follow the instructions and use the material as directed and good results will be obtained.

After feeding the syrup you will have to give the hive close watching. Also during and prior to feeding, all supers should be removed from the hive to make the bees concentrate on cleaning up of the hive.

Directives say to use the drug treatment every spring and fall as a regular part of apiary management.

Thus through feeding and handling of the bees it is possible that AFB can be controlled to a larger extent than it is now. However, keep in mind one fact that most users of sulfa overlook. **Sulfa does not, I repeat, DOES NOT kill either the spore or the germ that causes AFB.** It merely allows the bees to build themselves up against the germ. But by allowing the germ to get a foot-hold it is possible that in time to come the germ should be a rare item around any apiary. Also remember that one hive showing up with AFB means simply this:

There is in your neighborhood a source of AFB and that should be a warning to you to protect your other hives by the sulfa treatment.

If you do not desire to feed sulfa in syrup you may do so in pollen cakes.

Further information on this subject may be obtained by securing a copy of Circular No. 341 from the University of Missouri, at Columbia.

Diagnosing AFB seems to be a stumbling block for a lot of people. U.S.D.A. Circular No. 392 advises that AFB and EFB may at times look so much alike that it is impossible to tell the two apart except through a laboratory examination. However, that takes time, and time in the cure of any disease is something you do not have enough of. There is a simple method of determining if the trouble is AFB or EFB. However, the experiment seems to have faded from view for some unknown reason. I refer you to the Yearbook of Agriculture, 1943-1947, House Document No. 708, pages 686, 687, and 688. (Can be obtained from Superintendent of Documents, Washington, D.C.) In this book it tells one how to check for AFB. The test is so simple that there is no reason for any person burning a hive by mistake. This same experiment is also described in U.S.D.A. Circular 392, the test being described on page 9 of that publication. Briefly the test is this: A few of the scales of the disease (AFB) are dropped into a solution of diluted whole or reconstituted milk at ordinary temperatures. If the milk clears in 15 minutes the scales are AFB; if it does not, then the scales are of some other disease, perhaps EFB. Breaking it down, the solution should consist of 20 drops of warm water and 10 drops of the milk. It is best to have the water and scale in the vial first, then shake well so that the disease is scattered through the water, then add the milk. Do not shake after the three ingredients are mixed well; that is, allow them to stand un-

disturbed for 15 minutes after mixing.

By this test a person can determine exactly if he has AFB in his apiary. Also keep in mind that AFB can be spread very quickly if robbing sets in, so the usual precautions should be so closely followed that it can never start. Once started the only thing you can do is to destroy the hive. And then that is too late because the disease will be scattered far and wide through the apiary.

I have noted several cases of burning where EFB was involved. It is not necessary that you burn in the case of EFB, says U.S.D.A. Circular No. 392. Simply dequeen and give the bees time to clean up the hive and then requeen with a new young good queen and the hive should return to normal in a short time.

In talking with beekeepers I find that some of them do not read the publications available to them. In these circulars they will find very much interesting information and little-known facts. It is through education that we become strong and prosper. Little-known facts become a help. For instance, did you ever wonder why AFB did not decay? Read the Year Book for 1943-1947 and you will discover that bacterial growth will not attack AFB after it has killed off a hive.

I am new at this game but already my book shelf is two and one half feet long with literature on bees and pertaining to bees.

AFB is only one disease of bees. There are others, and one must keep that in mind when inspecting a hive for trouble. There may be more than one type of trouble in a hive at a time. In my own case, if in doubt I isolate the hive until I can determine if it is healthy. In this manner there is less chance for robbing and spreading of the trouble. Perhaps some day every apiary will have an "isolation ward" for hives suspected of having trouble. It is something to think about.

Remember that the bees will help you if you will help them.

Suggested publications to read:

Cir. 554—Honey and Pollen Plants of the United States, from Supt. Documents, Washington, D. C. ..... .10

Bltn. 961—Transferring Bees to Modern Hives, from Supt. of Documents, Washington, D. C. ..... .05

Cir. 392—Diagnosing Bee Diseases in the Apiary, from Supt. of Documents, Washington, D. C. ..... .10

Cir. 341—Sulfathiazole Control of American Foulbrood, from University of Missouri, Columbia, Mo. .....

Cir. 386—The Wax Moth and its Control, from Supt. of Documents, Washington, D. C. ..... .05

Cir. 650—Factors Affecting the Usefulness of Honeybees in Pollination, from Supt. of Documents, Washington, D. C. .10

Bultn. 1713—The Treatment of American Foulbrood, from Supt. of Documents, Washington, D. C. ..... .05

Agricultural Yearbook for years 1943-1947, from Supt. of Documents, Washington, D. C. 2.00

There are other publications on the market for your purchase. The price of one of the books may well save you one or all of your hives.

[Regarding EFB, there is at present in some western states a very virulent type of this brood disease that apparently does not yield to the present recommended treatment. Special work is now in progress to learn more about this organisim. —Ed.]

Part of an apiary of Laurence Ems'ander, Riverside Drive, St. Cloud, Minn. The dog, a constant companion of the owner, wanted to have his picture taken with the hive, which shows tar paper wrap for winter protection.

Jesse Hernandez's Charm Against Bee Stings

By Robert J. Holden, Washington, D. C.

As most people who've had experience with wild bees know, robbing a bee tree swarming with angry bees without wearing a bee veil and gloves isn't recommended for the faint-hearted. Yet, I knew a fellow in the Rio Grande Valley of Texas who made it seem like child's play. He had no more fear of poking his head into a swarm of wild honey bees than he had of letting a house fly land on his nose.

Jesse Hernandez had what he considered a sure-fire charm against being stung. "It's very simple," he says. "Just show the bees you're not afraid and they'll never bother you." He based this on the theory that a frightened person's body gives off a peculiar odor the bees sense and instinctively find offensive.

Jesse made a hobby of hunting bee trees. He wasn't particularly interested in bees—except as gatherers of honey. As a bee tracker, though, he was without peer in those parts. Some experienced bee hunters use a bee-box to trap the little insects, then release them one at a time to establish a line to the tree. Jesse scorned the use of such paraphernalia. The only lining and crosslining he ever did was studying the flying bees then following the direction the laden bees were taking.

I went on a couple of wild honey hunting expeditions with Jesse, and watching him in operation was a real education in "beeology." His favorite hunting grounds were the mesquite and cactus lands along the Rio Grande where the bees build their homes in thick mesquite bushes. Wild honey nests abound in this area, for the large cactus flowers are excellent "filling stations" for nectar-seeking bees.

On my first trip we were walking along when I noticed Jesse glancing skyward from time to time, never pausing in his conversation. Being new to this sort of thing, I was full of what he must have considered pretty elementary questions.

"Are you actually tracking bees by just taking a quick look up there?" I asked. "They seem to be flying in all directions to me."

"It does look that way," he laughed. "But if you look closely you'll notice some are flying slowly and pretty much in a straight line. They're the babies I've got my eye on. You see, as soon as a bee fills up it heads right for home, and being loaded down, it just doesn't have the zip the empty ones have."

I tried watching closely after that and saw a few appeared to be flying lazily along, but I quickly lost sight of them without determining which direction they took. However, my sharp-eyed companion had no trouble staying "on line," for within an hour we reached a dense, brambly mesquite bush which appeared to be electrified by the buzzing of hundreds of pairs of tiny, transparent wings. Barely discernible through the maze of thorns and brush was a light-gray colored, egg-shaped nest, about a foot-and-a-half long and eight inches in diameter, cunningly hidden with the wise instinct of survival by the canny bees.

Then came what seemed to me the most difficult part — braving the stinger-armed little guardians and going in after the honey. Jesse was quite calm as he rolled down his shirt sleeves and buttoned his collar. He explained that he wasn't afraid of bees crawling inside and stinging him, ". . . . just don't want any of them trying to build a new home on my bare anatomy." Then while I beat a hasty retreat to a safe distance away, he pulled a two-foot-long machete from his belt, took a firm grip on the handle, and started hacking away at the brush.

Within a short time he cleared a path to the nest which was securely anchored to a larger branch. From where I stood I could hear the tone of the bees' buzzing increase in intensity as they sensed the intruder. Ignoring the angry swarm, Jesse took a big swing and neatly whacked off the anchor branch. Then, tearing it loose from the smaller branches which held it lightly, he walked away with his honey-laden cache, leaving several hundred frustrated bees flying in confusion among the wreckage. Except for a few thorn scratches, Jesse came out of it unscathed.

Although I didn't share in the dangers on this and other honey-hunting trips, I did come in for some of the reward. And after tasting the delicious wild honey in the comb I was almost convinced that perhaps I might learn to look bees in the eye and go in business for myself.

Holiday Sweets

By Mrs. Benj. Nielsen
Aurora, Nebraska

Choco honey sweets.—Photo courtesy Kellogg Co.

Remember how the time seemed to drag? The days went so slowly and you could scarcely wait until Christmas. Then the older you get the faster time goes until, especially before Christmas, when it seems to fairly fly. And how will we get everything done at the last minute!

Among the many nice qualities of honey is that you-can-prepare-cookery-a h e a d-o f-time-to-be-used one. Flavors mingle and merge and actually improve. And I know of no time of the year when advance preparedness comes in handier! Few goodies actually improve with a waiting period as you will find honey goodies do.

Any of the results from the recipes chosen for this month will make most attractive gifts. And don't forget that a jar of your finest honey, attractively gift wrapped will make a most acceptable yuletide gift for that sweet-toothed individual or family who "has everything."

A very Merry Christmas to you and may your coming year be filled with good things.

Choco-Honey Sweets

Two packages (12 ounces) chocolate chips, ⅓ cup honey, 5 cups whole wheat flakes, tiny colored candies, and striped peppermint sticks.

Melt chocolate chips over hot but not boiling water. Add honey and whole wheat flakes, mixing until flakes are well-coated with the mixture. Drop by spoonfuls onto waxed paper or spread in shallow greased pan to one-fourth inch thickness, and when cool, cut into desired shapes.

For Christmas wreathes place spoonfuls of mixture on wax paper and with two forks shape into wreaths. Decorate with tiny red candies to represent berries or lights. After chocolate hardens, tie with red ribbon bows.

To make Christmas trees cut stick candy into three-inch lengths Place a tablespoonful of mixture on top of stick candy and shape with two forks to form a Christmas tree, with one end of the stick candy representing the tree trunk. Decorate with tiny colored candies to represent lights.

Glazed Honey Orange Wafers

One cup butter, ½ cup sugar, ¼ cup honey, ¼ cup orange juice, ½ teaspoon orange extract, 3¼ cups sifted flour, ½ teaspoon soda, 1 teaspoon baking powder, and ½ teaspoon salt.

Cream butter until light. Add sugar gradually, then the honey, and continue creaming until light and fluffy. Add orange juice and extract.

Sift flour, soda, baking powder, and salt. Add to creamed mixture. Chill dough. Then roll out ⅛ inch thick on lightly floured board and cut in desired shapes. Place on baking sheets and bake in moderate oven, 350 degrees F., for 15 minutes or until delicately browned. Cool on cake racks. Use pastry brush to brush on glaze and sprinkle with finely chopped nuts, or use tinted powdered sugar icings and sprinkle with candy decorates.

Honey Glaze

One-half cup sugar, ½ cup honey, and ¼ cup orange juice. Combine and simmer 20 minutes.

Honey Pecan Roll

One cup light brown sugar, 2 cups white sugar, ½ cup honey, and 1 cup evaporated milk.

Combine in saucepan and cook slowly, stirring occasionally to soft ball stage, 236 degrees F., or until a few drops form a soft ball when dropped into cold water. Remove from heat. Cool at room temperature, without stirring, until the hand

(Continued on page 758)

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Christmas Gifts from the Kitchen

By Constance Leeby
(Associate Professor of Home Economics, North Dakota Agricultural College)
(A talk given over the radio in December 1950.)

This is a tradition in America. Since early history we find mention of interesting and lovely homemade food materials presented at the Yuletide season.

Look over your canned fruits, jellies, jams, and pickles and pick out attractive-looking jars—wrap in cellophane, tie with ribbon and a sprig of pine or holly. These are always most welcome. To those who have had honey bees over the summer period, have you ever thought of giving a jar of strained honey or a comb or two—nicely wrapped? Honey is usually mild in flavor and light in color and it is a product of which we can be justly proud. Honey is a welcome gift for it can be served with so many foods and also combined in many interesting ways in the preparation of other foods.

Then there is one's favorite fruit cake baked in various sized loaves, or steamed plum pudding. These are rich with fruits and will go far in serving. They can be wrapped to be a most attractive gift. Then too, there are other steamed puddings as fig, date, cranberry, chocolate, suet, and others, which may be made into individual size portions. They can be steamed in custard cups, pyrex or pottery, and the cups can be a part of the gift, both very welcome. The nut breads and banana bread loaves are very acceptable gifts too. Other Christmas breads - typical Yulekaka - raisins, citron, Christmas bread tree, balls of dough placed in the shape of a Christmas tree on a baking sheet, or dough ropes woven back and forth for a tree and decorated after baking.

There seems to be no end to the variety of appropriate cookies - they can be rolled, sliced refrigerator, dropped cookies, or those put through a cookie press. They may be thin, crisp, or yummy ones - all your favorite recipes. Some may be decorated with candied fruit, others frosted and trimmed. There are so many good pattern cutters available at little cost so a wonderful variety of cookies can be made from one or two simple doughs. Use the recipes you like best for the base material and then let your ingenuity and imagination work out interesting surface treatments. And if you do not have pattern cutters - do a little drawing on card board, cut out, place the design you make right on the rolled out dough and with the point of a paring knife, follow around the pattern. These can be a Christmas tree, Santa Claus, bell, star, etc., and Christmas tree canes, or place long rolls of dough on pan shaped like a cane. Frost canes in white - powdered sugar frosting and stripe diagonally with red, using a plain cake decorating tube. Box your finished cookies nicely, or arrange in a gift mixing bowl, or on a cookie sheet or in a casserole, and even in one of the new plastic boxes. It's a nice surprise to receive a practical gift and then find it filled with a variety of interesting cookies.

If you have a cookie press, try this idea. Make a plain white sugar cookie dough—divide into three or more parts. Keep one part white and with vegetable coloring tint a portion pink and one light green, etc. Make long rolls of the colored and white dough about the thickness of your finger, and place side by side in the press. Then as the doughs are forced out, you get patterns in three or more delicate colors. These can be decorated with the little cake candies to add a festive finish, or frosted after baking.

When it comes to sweets, there are so many—choose your favorite candies—soft, such as fudge, penochie, divinity, sea foam, etc.—stuffed dates—dried fruit candy in which there are several varieties of dried fruit ground together, mixed with honey and pressed into a pan, then cut into squares and dusted with powdered sugar. This is especially good for the children. In the hard candy varieties, there are brittles, decorated lollypops, taffies, sugared nutmeats and don't forget the popcorn and "dry cereal" balls. Take your favorite pop corn ball syrup recipe and use on either the popped corn or cereal.

Just the other day I saw a nice suggestion for the cereal balls. They were made about the size of a walnut and strung on a cord with a colored gum drop between each ball and it was a most effective Christmas tree decoration.

Watch your magazines at this time of the year for additional suggestions for "Gifts from the Kitchen" —to add to these I've just described.

Live and Learn

By Propolis Pete

Why doesn't some smart beekeeper invent a sure way to introduce queens for us little fellows? If you want to "re-king" a flock of chickens, all you do is to find the rooster and make a fricasee out of him. I can't imagine any way of re-queening that would eliminate hunting for the old queen to get rid of her, but it does seem that there is a way to put in a new queen right away, so that she can start to lay almost immediately.

It stands to reason that when a chap has a thousand or twenty thousand colonies, he doesn't re-queen the way that you or I do. He simply couldn't afford all of this hocuspocus of finding the queen the day before introducing the new one, and then putting the new queen in a special cage that permits nice young bees to associate with her, but keeps the bad old ones away from her. Either he lets the bees do their own requeening when they are ready, or he eliminates a colony with a poor queen. Or, he has a sure fire way to do it with no bother or fuss.

What started this outburst is that I have just been cogitating about some of my hives in the season just past. Generally I have pretty good luck installing queens. But one out of five will generally give me trouble in one way or another. That is too much waste of time, money, and next year's honey. Anyway, in one of the hives that I requeened last summer, I killed the old queen and the next day put in the cage containing the new one, to let the bees eat her out of the cage. As instructed, I left them alone for a week, so that I wouldn't lose her because the old bees blamed her for their troubles. When I did look, the cage was empty, but I didn't see any eggs or young brood. The bees acted all right, that is, they went about their business with no distress signals flying, so I didn't do anything about it. A week later, still no eggs, and they still acted queenright. I got one of my curiosity streaks on, so didn't do anything again, just to see what would happen. Nothing happened, but in exactly four weeks I saw eggs, and the hive has done fairly well ever since.

Those four weeks were lost. Not an egg was laid in that hive, and it dwindled badly until the new brood emerged. Since it takes three weeks from egg to bee, and the hive was eggless for four weeks, that meant a gap of seven weeks between the last eggs of the old queen and the first bees from the new one. They tell me that the life of a bee in the summer is about six or seven weeks, so the only bees left to build up the colony were from the brood that was in the hive when I dequeened. I guess that colony just about made it.

When wintering time came, they had quite a respectable cluster of young bees, but no stores. I gave them 20 pounds of 2/1 sugar syrup, and will start the feeders going as soon as it warms up next spring. Now supposing that I had assumed that they were queenless after the second week, and put in another queen. She would have been lost, and the time and money wasted. If I had united this colony when things looked most hopeless, I would be minus a good colony.

If there were some way that we could fool the bees into not realizing that we had switched queens on them, egg laying could go on with only maybe a day or two gap in the brood cycle. I read that the bees seem to recognize their queen by the smell. So why can't we find a way to make the new one smell like the old one, or make them all smell alike until her majesty begins to lay?

There is a method by which the hive is dequeened, and then thoroughly demoralized by excessive smoking and pounding, after which the new queen is run in at the entrance. I tried it twice a couple of years ago when I didn't have the chance to really keep bees, and it seemed to work both times.

Maybe I'll try it again next year, or see if I can dope out some essence of good fellowship that will make them forget their troubles for a couple of hours until the new management moves in and starts doing business. The trouble is that with my few colonies, I need more honey than I can produce, and experiments with one or two hives don't mean a thing.

[During the years many methods of queen introduction have been tried—some of them said to be practically 100 percent "sure fire". The consensus now seems to be that a queen that is laying can be introduced more successfully than a mated queen that has been kept in a mailing cage for a few days. Space does not permit further elaboration of the subject at this time but more will appear later. As Propolis Pete says, "Why doesn't some smart beekeeper invent a sure way to introduce queens?"—Ed.]

XUM

Second Glances

C.M. Isaacson

That quadruple case design of Warren Sadler's makes this method both easy to use and practical so far as first cost and upkeep are concerned (page 649). In these days of needing to keep costs down ideas of this sort are worth much. The framing covered with asphalt paper; the cement hive stands; the ease of assembly each fall; and, too, the fact that the cases serve a dual purpose as a windbreak in summer, all make this "system" a good one to try out. And I appreciate the way his article begins — "I caught the bee fever —". That indeed is why some of us stay in the game — it's a (pleasant) disease that we cannot rid ourselves of.

Nature's methods of development do result in real adaptation for a given locality — in bees, as well as in other ways (page 652). As Mr. Mead points out in telling of the native Vermont bee (of the highlands) it is a cruel and slow process, even though a certain one in keeping only that best fitted to survive. The characteristics mentioned—long life, ability to fly at low temperatures, early cessation of brood rearing with consequent saving of honey, quick buildup in the spring, and a tendency **not** to "swarm to pieces" —all sound like a strain well worth examination and propagation by those who raise and supply bees and queens.

A quick and certain means of locating diseased material for diagnosis is found in the relatively inexpensive "black light" lamps. That they are safeguarded against injury to the user is also important. Research is continually finding new ways that aid us all in various ways (page 654).

Mr. Phillip's reminiscences and accounts of changes in Jamaica after 50 years are of real interest—especially since they largely concern a land few of us know much about. That the beekeeper's "paradise" of old had gone with the changed flora was not pleasant, and the introduction of A.F.B. must have seemed as an "evil in the garden". That closing paragraph though, is probably the most important one of the article—that we live on in our association with and help we give to others. It is true and heartening (page 656).

Simple things loom large in our lives. Such a very simple thing the "discovery" of the bee space by Langstroth seems to us, so it is hard for us to see what it meant to the industry then and ever since—with his accompanying invention of a hanging, truly movable frame. As his old friend said, it was not an invention but a **revolution!** We owe very much to the vision, the daring and steadfastness of him and his fellow pioneers of that day (page 660).

The actual production of queens is the substance of the fifth article by Roberts and Mackensen (page 664). The use of a superabundance of bees, honey, and pollen are points followed by most good queen raisers, but the insistence upon the importance of drone comb may not be so well understood at first glance. The feeding of pollen cakes early is also probably of much value in inducing the right "feeling" in the colony, as well as, of course, inducing greater brood rearing.

Blessings, big and small, are very many, says Mrs. Nielsen, and she is surely right. We have much to be thankful for this year again—and not the least should be if we ourselves are **able** to help those less fortunate. That is one of life's greatest privileges. So let's extend our Thanksgiving—to each day of the year! (page 668).

Mrs. Grace' musings lead to a sure truth—that we do not live to ourselves (page 671). Even as the fallen bee that occasioned her thoughts, each of us can play a part in our locale—and more than that for us, in our country and the world. No part is too small, and all enterprises need the cooperation of others. So whether our part in support of the various parts of our vocation (of which the Institute is one) be large or a tiny one it is a part that is needed. Let us not forget.

Colony odor as a factor in queen introduction is more or less being abandoned as a theory (page 673). Desire and condition of the colony and behavior of the queen are much more the determining points. If the beekeeper can bring about a condition so that the queen to be introduced shows no fear, the battle is more than half won, and a desire by the bees for a queen will complete the wanted picture. Those nucs with laying queens that the Editor mentions are very valuable things in the apiary.

I Brought the Nectar to My Bees

By J. E. Johnson, Verona, Missouri

My letter printed on page 625, of the October issue needs an explanation. It was written some time ago. Unfortunately, my friend, Mr. Bond, has since died—shortly after I visited him. The home and grove of trees were sold and the trees cut down.

I now have over 700 vitex trees that bloomed this year. Some of them are 12 feet high. The bees began working on them about June 25 and they were still working on some of the younger ones the first week in October. The older trees are heavy with seed.

In my 70 years' experience, I have tried many honey plants, such as the Simpson honey plant, the golden honey plant, catnip, horehound, motherwort, basswood, different varieties of locusts, milkweed, buckwheat, anise, hyssop, mountain mint, and several others. All were good but of course some were better than others.

Many localities have weeds and other plants that yield at times but there is need of some steady yielders to fill in between to keep up brood rearing and insure plenty of honey for winter stores. This need, I have found, is well supplied by the vitex trees, especially the hardy strain that I have, and that Mr. Bond was so enthusiastic about. The trees yielded without failure for him nearly three months each season for 16 years. They have done the same for me the past eight years, and the yield keeps up the last half of the season when other good honey plants fail. In all the years I have never found anything so reliable or that can come anywhere near to it. The honey is also a very fine quality.

I have also succeeded in getting nearly 10 acres of golden honey plant growing on waste land along a little river near me. I also have a good deal of vitex along the same river, also on waste land where ordinarily only weeds of no value are growing.

Neither vitex trees, Simpson, nor golden honey plants are objectionable to anyone and they are easily destroyed if not wanted. The vitex trees are fine to catch and hold the soil on land subject to erosion. I think they could become very useful for this purpose.

The vitex seed is very useful for quail to feed on, for when the ground is covered with ice and snow, not only quail but other birds, finding the seed from the late bloom, will stay on nearly all winter. If I were a young man, I would plant several thousand trees.

Mr. & Mrs. J. E. Johnson

During my long life, I have received many letters from all parts of the United States, from England, Germany, Australia, Canada, and New Zealand. Some of the beekeepers writing me, having 10 to 2000 colonies, were discouraged. I have no new methods to offer but to the majority of the readers of Gleanings who have 100 or less colonies, I would say it is possible to increase the nectar output in most localities and insure a fair crop of good honey every year by planting vitex, Simpson, and golden honey plants. First plant in a garden, then raise plenty of seed to sow on waste land.

Most of my honey I sell locally in gallon, half-gallon, and quart cans or jars, all of it at 25c a pound. My customers often furnish their own containers or pay me for them.

Some of my honey I extract but many prefer comb or bulk comb honey. I am nearly 85 years old but enjoy life. My wife and I celebrated our 63rd wedding anniversary in August, 1951. During all the years we had honey on our table continually. Surely we have proved that honey agrees with us for we have had good health. We use very little ordinary sugar or meat.

After this coming spring, I fear I shall not be able to ship trees, for it is a great deal of work to pack them so they may go safely by parcel post. I also expect to sell all of my bees but about 10 colonies.

XUM

A Talk to Beginners

M. J. Deyell

At this season of the year when colonies of bees in the northern hemisphere are supposed to be in a state of quiescence and they should be left strictly alone, there is nothing much to talk about so far as apiary management or hive manipulation is concerned.

If beekeepers in this latitude were to examine the brood chambers of hives they would find little if any brood in the cells of the combs. Queens are taking a well-deserved rest. The bees are conserving their energy. When the temperature inside of the brood chamber reaches 57° F., the bees start to form what is called a winter cluster. As the weather grows colder, this cluster forms more tightly. The bees on the inside or center of the cluster are quite active and apparently are generating heat by muscular activity. Much of this heat is retained in the cluster by the bees on the outer edge of the cluster forming a periphery or rim approximately 2½ inches in diameter, consisting of bees packed closely together with their heads facing the center of the cluster. This is a marvelous phenomenon and we yet have some things to learn about this winter cluster.

Some say that the bees on the outside or rim of the cluster exchange places periodically with those on the inside in order to bring about a fair distribution of labor. Others say that this interchange of position does not occur but that the bees on the outer edge of the cluster, where the temperature is colder than in the middle, eventually perish and drop down to the bottom of the hive. If a warm spell comes the bees naturally break their cluster, then reform it when the weather again becomes cold.

Some beekeepers do not seem to realize what actually takes place in a beehive during the winter. They say the bees simply huddle together in order to keep warm. That is true but they have to generate heat in order to keep warm. It has been found that the temperature in the middle of the cluster never goes below 57° F., even though the temperature outside the hive may go 30 or 40° below zero. It has been found also that there is not much difference in the temperature outside of the cluster in a hive

M. J. Deyell

and that outside the hive, even in an insulated hive. It stands to reason, however, that a well-insulated hive should tend to prevent sudden temperature changes outside the cluster better than a hive with no additional insulation.

On the other hand, a single-walled hive or even one with a single wrapping of black building paper would absorb the rays of the sun which should result in warming the cluster of bees sooner than a hive with heavy insulation. But it is possible that a colony that is wintering well and not badly in need of a cleansing flight would be better off not to receive warmth from the sun through the walls of the hive. If, however, bees were in need of a cleansing flight and the sun warmed the air outside the hive enough for the bees to take a short flight, a hive with little or no insulation would permit the bees to take a flight, whereas a heavily-packed hive might not allow the bees in the cluster to become sufficiently active to take advantage of a good flight day.

And so, there appears to be two schools of thought on this matter and time will tell which is right. We have to be very careful in reaching conclusions because there are so many factors to be taken into consideration.

What I Found When Rabbit Hunting

I related this incident in one of my talks some years ago but for the benefit of new Gleanings readers, I am repeating it.

One cold December day I was out

rabbit hunting. As I recall, I did not shoot a rabbit but I did learn something about bees and the winter cluster that has been worth more to me than if I had shot a dozen rabbits.

One of the Root Company apiaries was at the edge of the woods where I was hunting. The colonies occupied double-story single-walled 10-frame hives, the upper stories consisting of deep supers or brood chambers. These colonies had gone into winter in excellent condition. I assumed that the centers of the winter clusters would occur approximately at the center of each two-story hive, or between the two sets of frames. In order to find out if my assumption was correct, I lifted one end of an upper hive body and beheld, for the first time, the center of a winter cluster. I had split the cluster in two and could observe the formation of bees in the lower hemisphere of the cluster. What I saw corresponded with what I had read in different books describing the cluster. By the way, I have read all of the bulletins that I could lay my hands on.

For an instant after raising the end of the top brood chamber, I saw the periphery or rim of bees on the outside approximately 2½ inches or 3 inches in diameter with their heads facing in, while the bees in the center of the cluster were not clustered as tightly but were moving about slowly. Of course, in a few seconds this formation of bees was broken and the bees began to intermingle. The cluster occupied a part of six or seven spaces between combs.

To make sure that my eyes were not deceiving me, I opened up two other hives and found practically the same thing. I should say that the outside winter temperature that day must have been about 10° above zero.

As I have thought about this winter cluster it has occurred to me that in a sense bees are smarter than human beings. For thousands of years bees in the North, even before they were put into modern movable frame hives, have been wintering under their own power, while we humans have had to devise various means of keeping warm during the winter. Some of us have thermostatically-controlled heating plants in our homes. In a sense a winter cluster of bees has humans beaten, in that the bees produce and regulate heat needed, whereas we de-

No. 1.

No. 2.

No. 3.

The above pictures show the apiary of Marvin Kosanke, of Ripon, Wisconsin.

No. 1 is the apiary in December, 1950.

No. 2 the same apiary in January, 1951.

No. 3 the apiary completely covered with snow in February, 1951.

pend on some source of heat being furnished and regulate it.

More About the Winter Cluster, Types of Hives, and Placement of Winter Stores

Since this topic has been introduced, we might as well go a little farther. As a matter of fact, the entire matter is an endless study.

I used to have here at my desk all of the bulletins in English on the winter cluster, heat production of bees in winter, etc. Some of these have been loaned or misplaced. Most of us are familiar with Bulletin No. 93 put out by Dr. E. F. Phillips and George S. Demuth in 1914. This bulletin represents an enormous amount of work and anyone particularly interested in this subject should read it. If available, it can be secured from the Superintendent of Documents, Washington, D. C., for the price of only 5c or 10c.

Another bulletin, No. 988, "Heat Production of Honey Bees in Winter", by R. D. Milner and George S. Demuth, appeared in December 1921.

Three bulletins I cannot find are by Burton N. Gates, of Massachusetts, which came out in 1912, one by Wilson & Milum, and another by C. L. Corkins.

Since writing the first part of this talk, where I refer to the possible value of heavily insulated hives vs. hives with thin insulation, I came onto the following in the last paragraph of the No. 93 Bulletin:

"If the cluster forms such an efficient insulator in itself, it might be presumed that packing about the hive is of little value and that it might even be harmful, in that it would not serve to save heat and would prevent the heat of the sun from penetrating the cluster. This line of reasoning does not follow and in any case it is unsafe to speculate about these things without more facts."

I attempted to say this but apparently failed to be as clear and concise as the above quotation.

It seems to me that a colony in a two-story hive or even a three-story hive has an advantage over a colony in a single-tory hive in that the winter cluster can expand laterally or sidewise, if necessary, between the two sets of frames, whereas the colony in a single-story hive has to move sidewise, when necessary, by the bees going up over the top bars, down under the bottom bars, or around the end bars. When the weather is very cold and the bees cannot or should not break cluster, it is difficult, if not impossible, in a single-story hive for the bees to move sidewise on to fresh honey and consequently such colonies may die of starvation. Most of us have seen these clusters of dead bees early in the spring with perhaps a few combs of honey at the side of the hive a few inches away from the dead bees.

Years ago, when the Quinby deep-frame hive was quite commonly used, it was customary to punch a hole about one inch in diameter through the center of the deep combs, late in the fall so the cluster could expand sidewise during the winter if necessary. Of course, the bees would fill up these spaces or holes in the combs with drone brood the following season and such procedure tended to mutilate perfectly good comb.

Not long ago I called on a beekeeper who has made a frame double the depth of a standard frame which would be approximately 18 inches deep. This beekeeper says colonies winter well in such a hive. It would seem to me it would be rather difficult to handle such large frames but this beekeeper says he does not need to handle them often. I asked him how the bees moved laterally but he did not know. It is conceivable, of course, that such a brood chamber would be likely to have an abundance of honey in the upper portions of the combs and thus it would be unnecessary for bees to move sidewise onto fresh honey.

This brings me to the important point in this discussion, namely, that it is extremely important that there be an abundance of honey above the cluster late in the fall or early in the winter so that as the bees move slowly upward and consume some of the honey, they do not reach the top bars and run out of honey before spring. That is why I like to have the deep food chamber jammed full of honey at least 45 or 50 pounds in addition to 15 or 20 pounds of honey in the lower chamber late in the fall so that there may be no danger of the bees running short of stores before spring.

In my own apiaries, I have some colonies in three-story shallow super hives, the upper two stories being practically filled with honey in the fall, in addition to a small amount in the lower story. With this type of hive, there are two spaces between the sets of frames that the bees can use in moving sidewise.

As a matter of fact, I could secure good crops of honey with bees

(Continued on page 759)

American Honey Institute News Notes

By Harriett M. Grace, Director
Commercial State Bank Building
Madison 3, Wisconsin

Christmas is a child's day,
That no one can dispute;
You only need to watch a boy
Show off his Christmas suit,

Or see a girl with grin so wide
It spreads from ear to ear,
When toys abounding on the floor
Show Santa has been here.

It is a joy to witness such
A happiness supreme
As just a little boy can show
When eating his ice cream!

To fill the stockings at the hearth
Is only half the fun —
To watch the children empty them
Brings joy to everyone.

Not for themselves did grownups
Set up the perfumed pine,
But rather for the young folks who
Don't bother to confine

Their unsurpassed delight in all
The splendors of the Yule,
They save the extra branches of
The pine for fireplace fuel.

Has anyone beheld a sight
As joyous as a girl
Who dressed up in her fancy dress
Around and 'round did twirl?

Has anyone been witness to
As joyful an occasion
As the eating of a cookie man
With his nose made of a raisin?

Has anyone — yes, anyone
A heart so stony cold,
He cannot thrill as children do
To the Christmas story told

Around a fire so heaped with cones
It crackles loud and bright?—
If you are one who's lost this thrill,
Then we pity you tonight.

No loss will e'er be greater,
Than the loss of Christmas spirit,
You n'er will find another thrill
That even can come near it.

You've lost the one great treasure
That the Lord above bestowed
On every man and woman
To relieve his daily load

Of chores and work and routines dull,
That mind and nerve can fray—
He gave us the most precious gift
Of a glorious Christmas Day.

This children know and know it well.
Their Christmas spirit is ample
For every adult to behold
And copy as a sample

Of exactly what we ought to do
At every Christmas season;
To laugh and sing and happy be,
But n'er forget the reason

That Christmas day was given to us
By a good and gentle Lord
Who wanted humankind to act
As one harmonious chord.

* * * * *

Wives of members of the American Honey Institute: Watch for a booklet called "Holiday Honey Hospitality" in the next Members' Bulletin. It will contain menus, recipes, and hints for the Holidays. On the front page is a picture of an Uncooked Honey Fruit Cake with recipe.

* * * * *

1952 Calendars in Christmas colors are ready. This is a service to members. You may send one dollar per hundred for them to American Honey Institute. Madison 3, Wisconsin. (No imprinting).

"A little trick I picked up from my wife."

Editorials

W. K. Kellogg One of the greatest friends that honey has ever had, just passed away. W. K. Kellogg, who made Corn Flakes and his other cereals famous the world over, from his earliest boyhood was interested in honey. He believed in honey. He bought honey in many different countries as he was interested in the many various distinctive flavors. So thoroughly did he believe in honey that he mentioned it on all the packages containing his famous cereal foods.

Our old friend died early in October at the age of 91. The name, W. K. Kellogg, will live on and on.

* * * * *

The Wintering Problem If those of us who are interested in wintering bees and have attained a degree of success would take time to delve into the books written by L. L. Langstroth and Moses Quinby almost 100 years ago we would find that those men had discovered some of the principles that govern success in wintering bees in cold climates.

Quinby tried wintering bees in ventilated trenches under the ground but found that this resulted in too many mouldy combs. He then tried wintering in an insulated and ventilated room of a dwelling house. To overcome the problem of too much moisture in hives during the winter he conceived the idea of turning hives upside down. This resulted in dry combs in the spring.

Langstroth favored outdoor wintering except in very cold regions where bees are not likely to get cleansing winter flights. He stressed having very populous colonies rich in good quality stores, in hives with upward ventilation and protected from the piercing cold winter winds.

On page 338 of the third edition of Langstroth's book, "The Hive and the Honey-bee" we read: "The best apiarists are still at variance as to how much air should be given to bees in winter and whether hives should have upward ventilation or not. If the hives have no upward ventilation, then I believe they need as much, or even more air, than in summer. If upward ventilation is given, the smaller the lower openings the better, as it is not desirable that there should be a strong current of cold air passing through the hives. In my hives all the lower passages can easily be closed airtight and the bees allowed to go in and out through the winter entrance which is made at the top of the hive".

Regardless of differences of opinion by beekeeping authorities on methods of wintering—the amount of hive insulation needed, upper vs. lower winter entrances, etc., it seems obvious there are still some truths that need to be discovered about the winter cluster, also wintering bees successfully and economically in the North.

Let us hope some of these truths may be discovered during the next 100 years.

* * * * *

Beekeepers' Associations We have said in the past, and say it again with all the emphasis at our command, that county and state beekeepers' associations are an important part of the back bone of our beekeeping industry.

County associations reach down to the grass roots of our industry and should be encouraged. Usually there are a few interested people who carry most of the loads and those who will not accept responsibilities expect these few faithful souls to do most of the work. Obviously this is unfair. The bees in a hive all share the work that is to be done. The same should be true in an association. What has been said of county associations is also true of state associations.

At present, there appears to be some "let down" in interest manifested in both county and state associations. The secret of success lies in the election of officers that inspire cooperation and the achievement of goals set up for the year.

A good program committee is essential. Meetings should not lag or drag into the late hours. Panel discussions of topics appropos to the time of year can be made interesting. The chairman must insist on having a time limit for speakers and should hold them down to schedule, so that there may be time for questions and discussion from the floor. Member participation should be encouraged to sustain interest.

October 1951 Honey Report According to this report issued by the Bureau of Agricultural Economics, Washington, D. C., the estimated honey crop this year is 249,053,000 pounds, or approximately 16,000,000 pounds more than last year. The estimated per colony average for 1951 is 44.7 pounds as compared with 41.5 pounds last year, or a five-year average of 39 pounds.

The ten leading honey-producing states, California, Minnesota, Florida, Wisconsin, Ohio, New York, Texas, Michigan, Iowa, and Idaho, produced 59 percent of the crop.

We now have an estimated 5,572,000 colonies of bees, which is one percent less than in 1950. If the pollination program moves forward, more hives of bees than are at present available, will be needed and this may mean an increase in the number of colonies of bees in their country.

With fewer colonies of bees than last year beekeepers produced a larger crop of honey and the amount on hand is somewhat less than a year ago. These conditions appear to reflect a fairly healthy condition of our industry.

* * * * *

We Need More Young Beekeepers As we get over the country attending bee meetings here and there, we note the absence of young, up-and-coming beekeepers and the prevalence of middle-aged and older beekeepers. However, in a few localities there are some young and middle-aged people who are getting into beekeeping.

We wonder if sons of beekeepers receive enough encouragement in beekeeping from parents and whether beekeepers' meetings as set up from time to time focus enough attention on the young beginner beekeepers and their problems to hold their interest in beekeeping.

Not long ago we did attend one county meeting where a number of young beekeepers, each with a few hives of bees, were present. These young chaps are in the agricultural class of a high school and their teacher, being interested in bees, is anxious to help the boys.

Perhaps, if state and county associations would start junior bee clubs and cooperate as much as possible with young people interested in bees who belong to agricultural classes in high schools, also 4-H clubs, some headway might be made in developing beekeepers out of the ranks of young people choosing life vocations.

In former editorials we have mentioned the advisability of beekeepers' associations, both state and county, having some part of their monthly programs devoted to beginner beekeepers. Sometimes experienced beekeepers may give talks above the heads of the average beginner and even more experienced beekeepers.

In parts of the country where bees are used for pollination there is a crying need for more bees to perform the necessary pollination service. This means that there should be more young vigorous beekeepers coming along to carry on this important phase of beekeeping and to fill places made vacant by older beekeepers who have gone out of business or have passed on. Let us all encourage the young beekeepers.

* * * * *

What is Table-Grade Honey? This question is not easily answered. There are a lot of different kinds of people in the world and their tastes differ. What is said to be table honey by one person might be considered unfit for table use by another person.

Something depends on which honey or honeys people were accustomed to in their youth. People brought up on clover honey usually prefer it to other honeys; people reared in a region where buckwheat honey is abundant are likely to prefer this dark honey to light-colored honey.

But we have not yet answered the question as to what table honey is. It seems to us that honey of good flavor, regardless of color, should be considered suitable for the table. This term, "table honey", may be used to differentiate so-called good honeys from some others that are said to have an inferior flavor. Some off-flavored honeys may have industrial uses. Some seem to think that all strong-flavored honeys may be used in bakeries. This is hardly the case because some bakeries demand a mild-flavored honey of good quality. If a strong-flavored honey is used and the flavor is objectionable, this is apt to give the bakery goods an objectionable flavor.

Some handlers of honey have attempted to market honeys of different flavors. One difficulty is that it may be difficult to obtain certain honeys during certain years. In many cases honey plants yield nec-

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tar somewhat periodically, perhaps once in three or four years.

Other handlers of honey blend the different flavors together. By doing this they are able to maintain a fairly uniform blend acceptable to people living in certain areas.

Some 25 or 30 years ago The A. I. Root Company put out a brand called "Airline Honey" which was sold from coast to coast. This consisted of a blend of five outstanding flavors of honey. Customers became accustomed to this honey, and it was practically the same whether bought in Maine, Washington, California, or Florida.

Attempts are being made, and with some success, to change or remove the objectionable flavors from some of our dark honeys with rather pronounced flavors and odors. Such processing, if it does not actually harm the quality of the honey, may be warranted.

It would seem then that people living in the various areas of the United States should be offered honeys that they are accustomed to, also that all honeys of good flavor should be regarded as table honey.

Rapid Granulation of Honey In this area the fall crop of honey from buckwheat, goldenrod, and aster was the largest in some years. The warm weather following the flow enabled bees to drive off the excess moisture from the nectar, consequently the honey is heavy bodied and well ripened.

Occasionally, in this area, during a rainy fall season, it is difficult for bees to ripen fall honey thoroughly so the honey when extracted from the comb is quite thin. This year, however, the honey is unusually thick, in fact, so thick that some of it has already granulated in the combs. Such combs when put through an extractor are likely to break which results in the destruction of perfectly good combs, especially when run through a radial extractor.

When combs contain honey that is partially granulated, the liquid honey will be thrown out of the cells of the combs but some of the granulated honey will remain in the combs. This situation constitutes a problem for the coming season, namely that combs that contain a percentage of granulated honey should be cleaned out of the cells by the bees before the beginning of the major flow next season. It has been suggested that a good method to get this accomplished would be to put the supers containing granulated honey on colonies (perhaps two to each colony) in the spring, over inner covers with center blocks removed. If this is done on a cool day the bees would not be unduly stirred up.

Langstroth Visits A. I. Root In the January, 1923 issue of Gleanings in Bee Culture, page 19, will be found an article by E. R. Root, "Looking Backward". One part of the article is devoted to his recollection of Langstroth's visit to Medina. The following is from this article:

> During these days, and before Gleanings was born, I recall how father Langstroth used to visit us during the interims when he was free from those peculiar spells of head troubles that caused him to shut himself out from the world, and even from the men and things he loved. During those interims when his mind was clear he used to come to see us, for he was then living at Oxford, Ohio. I need not tell you how father and the rest of the family used to drink in what Langstroth had to say. Sometimes of an evening he would stretch himself on the lounge and take my hand, and, as only a grand old man could do, ask, "Ernest, are you true to your name?" And then he would "reminisce." What would I give today if those words that flowed so freely and eloquently (for he was a master of English) could have been taken down in shorthand, or, better, have been put on a phonograph record! He told how he came to invent the movable-frame hive—the steps that finally led up to the invention that was to change the whole beekeeping world and make the production of honey a commercial possibility; how he tried this kind of hive and that kind, including those of European make; of how he had learned in all his studies that the bees seemed to recognize what we now call a "bee-space." Then the thought came to him in a flash, why not make a wooden frame to hold the comb that would have a bee-space all around it, between it and the hive? The beekeeping world knows the rest. He told of the early importation of the Italian bee into this country. He talked eloquently of the writings of the early masters of bee culture; then, with a look of pain on his face, he related how this one and that one had tried to claim his invention and to rob him of his royalties. I recall those rhythmic words as they flowed from his lips—words that betrayed no bitterness, but words that showed he would be happy in the thought that the world would some day give him credit for what he believed (and rightly too) was a great contribution to beekeeping, even if he had been robbed of the money part. I then and there resolved that I would do my little part toward bringing this just recognition.

It seems appropriate that at this particular time we read words from the pen of a man living today who saw and talked with L. L. Langstroth.

From North, East, West, and South

SOUTHERN CALIFORNIA, Nov. 3

Weather: The winter season is coming on fast and still we have had very little rain. In the latter part of October Southern California was treated to a couple of light rains — not over half an inch either time — just enough to wet the top of the ground well. The past few days dry north winds have been blowing and the little moisture in the ground has disappeared. Good soaking rains are what we need and are longing for.

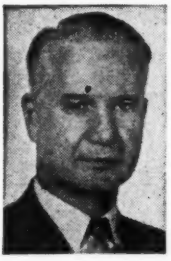
Honey Market: With a larger crop of honey in Southern California this year, producers are having some difficulty in disposing of their crop. It would seem as if there must be more advertising of honey as a food if there is to be a greater demand for our product. When honey is mentioned on the radio in a casual manner we wonder why its use can't be stressed. Perhaps if the tax of 1/12 of one cent per pound idea works out, more good advertising of honey will be carried on and a definite increase in the sales result.

Miscellaneous: The business of bees for pollination purposes has certainly grown at a rapid rate. We understand that a thousand or more acres of red clover are grown for seed in the Imperial Valley. This is a comparatively new crop in the valley and promises to become quite a help to beekeepers in that vicinity.

Lake Elsinore, the largest natural lake in Southern California, is dry and there is talk of making a state park out of the lake bed. Also Lake Hemet in Riverside County is dry. That makes a very serious situation as much citrus acreage is irrigated with the Lake Hemet water. Of course, the beekeepers of that area are concerned over the situation.

With the population of Southern California growing by leaps and bounds we should soon have people enough to consume all of the honey produced in these regions. The district south of Los Angeles is supposed to be the fastest-growing section in the United States. People are coming in at the rate of from one to two thousand persons per day. This certainly should help to create a market for the best grades of honey for table use and the darker grades for baked goods.—L. L. Andrews, Corona, Calif.

NORTHERN CALIFORNIA, Nov. 1



Weather. Refreshing and reviving rains fell over a majority of the central and the northern parts of the state, in varying amounts, during the past month. The rains came late enough so as to cause little damage to crops. Snows in the higher mountains blocked some of the roads temporarily and greatly reduced the fire hazard in the brush and forested areas.

Condition of Colonies: Beekeepers report that their colonies are in better condition, on the average, than at the same time last year. The legumes in the seed areas yielded some surplus and provided good stores for winter. Several thousand colonies were moved from northern California to Oregon under contract to be placed in Ladino seed areas. Many of these colonies produced no surplus and were short on winter stores when moved back into California. Several package-bee producers increased their colonies for pollination purposes rather than to shake as many packages as they had in previous years. This change in management has caused an increase in colonies in northern California. More colonies than usual will be wintered in one-story hives. The tendency in seed areas is to maintain colonies in two stories during the pollinating season. In most years this practice is desirable because the colonies secure but little surplus. The yield of nectar this past season was exceptional, however, and much honey was lost because of inadequate supering.

Pollination Service: The demand for colonies to be placed in legume-seed areas will be increased again this coming season and if they are properly distributed, there should be enough in northern California to take care of the demand. However,

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if eight or ten thousand colonies are moved to Oregon, there may be a shortage of colonies in the very areas from which the colonies were moved. The cost of moving has been estimated at around $2.00 per colony for the 800 to 1,000 mile haul. At $7.00 per colony rental fee, less 50c per colony for inspection and location tax, the net return is not as attractive as the beekeepers thought in the beginning.

Package Bees: Northern California is the home of a thriving package-bee industry, with more than 110,000 colonies devoted to package-bee production. The demand for packages within the state, to produce colonies for the pollination of legumes, may take up the surplus of bees which has been available in some years. Packages were used to advantage by some beekeepers this past season to fill their spare hives. Packages established six to eight weeks before they are needed in the seed areas make excellent colonies. Beekeepers in southern California who manage their colonies for the production of a citrus honey crop before going into seed areas, are using packages in increasing numbers to make their increase and to provide more rental colonies. The rentals usually pay for such colonies and their care during the first season.

Honey Marketing: A majority of the honey produced in northern California has already been sold by the producer. Some are holding a portion of their production for later sale at higher than the subsidy price. Beekeepers are beginning to wonder where all of the honey is going to and why the increased demand at this time of the year.

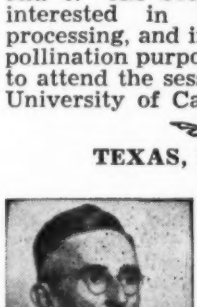
The tendency of the subsidy program to place a greater number of floral sources at the 9c level **is not good for the industry** because it tends (1) to reduce the overall price for honey and (2) emphasizes the poor quality of honey out of proportion to the volume of honey thus included. Several California honeys were singled out as honeys of poor grade when, in many instances, the honeys have a definite sale on the retail market under their floral names. This division of honeys into two grades for subsidy purposes, might be desirable from the viewpoint of bakers or table grades but the price and the divisions should not be decided by an agency which is not interested in production or in the sale of honey. An industry committee should be consulted on such matters, particularly when the practice places in the lower price levels honeys which are acceptable in certain markets as table honeys.

Commercial honeys used in the baking trade usually are blended by the better packers in order to make a more uniform product that can be marketed under a trade name. In this way those varieties which are not acceptable for the school-lunch program lose their identity and have definite value from year to year in the making of such blends. The actual amount of some of the so-called unacceptable honeys is very small when compared with the total amount of honey involved.

Honey Marketing Order: California beekeepers and handlers are now considering the acceptance of a self-help program which will involve the payment of 5c a 60-pound tin of honey by both the producer and handler for the promotion of sales and research of honey. The second year, the assessment can be raised to the maximum of 10c per 60-pound can if the Board of Directors deem it necessary for the good of the industry. It is important for all who favor this plan to return their ballot forms before January 15, 1952.

Miscellaneous: The California State Beekeepers' Association will hold its annual convention at the Hotel Asilomar conference grounds in Pacific Grove on December 4, 5, and 6. All beekeepers and others interested in beekeeping, honey processing, and in the use of bees for pollination purposes will be welcome to attend the sessions.—J. E. Eckert, University of California, Davis.

TEXAS, November 3



Weather: The temperatures during October were normal while rainfall over most of Texas was generally deficient. The heaviest rainfall occurred in south Texas while other areas are rather dry at this time and the benefit of earlier rainfall largely lost with the return of dry weather which has prevailed over much of the state during the past two years.

Bees and Plants: Brood-rearing continued active during October and most colonies have a good portion of young bees for winter. The fall honey flow was rather variable over the various sections. Locally the bees were busy working boneset, asters, and goldenrod. In better locations colonies made gains of 15 pounds with reserve stores now fully adequate while in less favorable locations colonies are lighter than they were two months ago and will require feeding in the spring. Broomweed blossomed heavily over a wide area and while this plant is usually important it was of little benefit this fall. Many beekeepers left their colonies in summer locations because of lack of bloom in the usual over-wintering locations. While moisture conditions are more favorable than they were a year ago, the soil is still too dry for growth of fall seeded legumes and the germination of early spring blooming wild flowers of importance to bees.

Market: Honey in the retail market is moving actively and prices are unchanged. Locally produced bulk comb is about cleaned up while offerings of extracted are readily absorbed by packers who have experienced some difficulty in obtaining adequate supplies; consequently, little honey has been offered under the government subsidy plan.

Miscellaneous: According to the U. S. Department of Agriculture honey report of September 15, the current year's honey production for Texas is estimated at 10,944,000 pounds. Although this amount is 31 percent below the 1950 crop, it is greater than earlier prospects had indicated, thanks to a better-than-average yield from cotton which, however, did not offset the failure of citrus and low yield of sweet clover this year. It is significant that the record honey crop in Texas in 1950 was obtained largely from sweet clover. The same year also showed record production of sweet clover seed in Texas, largely of the Hubam variety estimated at 18,900,000 pounds which is nearly one third of the U. S. total production. There is some concern among beekeepers over possible decline of sweet clover in Texas as has occurred in other states. Insect pests are becoming increasingly serious. Farmers are growing more acreage of other varieties of legumes resulting in decrease in demand and price of sweet clover seed. While sweet clover is of particular value in the blackland area, in some counties other legumes are gaining favor, particularly those that can be plowed under in the spring and followed by cotton or summer forage crops.

The Southern States Beekeepers' Federation will hold its annual meeting at College Station on December 3 and 4. The program has been released by the secretary and a cordial invitation is extended to beekeepers of the various states.—A. H. Alex, College Station, Texas.

NEBRASKA, November 5

Weather: Our fair state continues to break records in regard to weather. Subzero temperature in November is indeed unusual. And, at this writing, the ground is blanketed with snow. The cool, cloudy weather which characterized the summer months continued through the fall months.

Honey Crops: Reports indicate that crops were disappointingly short. Bees built up slowly in the backward spring, and, despite abundant bloom bees could not take advantage of the nectar-bearing plants.

Condition of Bees: Colonies go into winter in good condition. Flow from smartweed, or heartsease, was cut short by frost. Our crop of dark honey was short also, though the bloom was most luxuriant.

Beeswax Market: Market for this by-product is good with higher prices than last year.

Miscellaneous: Much interest was shown this year in obtaining services of bees for alfalfa pollination. Results were disappointing though, because of the adverse weather conditions.

Recently a customer, coming to the door, asked to buy beeswax. He told us that his wife wanted to use it in making cookies. This was a new use to us. Upon questioning him, he did not remember if she put the wax in the cooky mixture, or rubbed the cooky sheets with the wax. (She would have to remove her cookies in jig time, if this were the case.) He promised to find out for us and stop again.

Another customer demanded clo-

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ver honey, informing us that he had arthritis and hardening of the arteries, and suggesting that we pass along this information, claiming that it was the only thing that helped him. Each morning he took two tablespoons of blackstrap molasses, one tablespoon of clover honey, and one tablespoon of apple vinegar, blended in a glass of warm water.—Benj. Nielsen, Aurora, Nebraska.

MICHIGAN, October 23

Since my last Michigan notes of June 1st there has been much going on among the beekeeping fraternity of this state. Some of these activities I believe will be of interest to Gleanings readers in all parts of the country.

Summer Meetings: The Michigan Beekeepers' Association regularly sponsors two summer meetings. This year they were held at Alma on July 26th and at Bellaire on July 27th. Speakers included James I. Hambleton on "Research of Interest to Beekeepers"; Glenn O. Jones on "What Does the Federation Mean to You"; Gilbert Perigo, Chief Apiary Inspector of Indiana, on "The Beekeeper's Responsibility in Disease Control"; Alan Root on "The World Beeswax Situation"; and Arthur Kehl of the G. B. Lewis Company on "Trends in Honey Marketing".

It is worth while going to meetings just to hear such talks. However, I do believe that every association should hold discussions at meetings on problems facing the industry. We have many problems and meetings should be used to clarify our thinking and promote action leading towards the solution of these problems. Our associations, particularly through committees, provide the means whereby action may be taken by beekeepers to collectively further their own interests. Every industry has fields for collective endeavor where individual action is ineffective.

Elmer Carroll Dies: Many beekeepers throughout the country have seen or heard of Elmer Carroll. His passing on August 7th is a real loss to Michigan beekeepers. In spite of the fact that Elmer was confined to a wheel chair by arthritis he made an excellent job of publishing "Beekeepers' Magazine." Elmer also acted as business manager of the Michigan Beekeepers' Association. In spite of his physical handicaps Elmer had remarkable stamina and power to work. He was always right on the spot thinking and working for the Association. I doubt if we will be able to find anyone capable of doing as effective a job for the Association.

Mrs. Carroll and daughter Nancy have done extremely well in continuing to publish the magazine. However, they hope to sell before too long. I hope that the magazine may continue to be published in Michigan. It is a real asset to beekeepers of the State.

State Fair: I wouldn't be surprised if Michigan beekeepers did the best job in the country for the industry this year. They not only had about 120 feet of producer displays, and good ones, too; but also a 90 foot Association display directly opposite. In addition to this they had a honey queen who did an outstanding job. Barbara Seidelman, daughter of beekeepers George and Margaret Seidelman of Ionia was a true honey queen with grace, charm, good looks, and the ability to meet the Governor, the Director of Agriculture, and the thousands of other people at the Fair or watching the floats.

Kenn Hazard of Highland Park did a fine job of promoting the honey queen. In case any other states use the honey queen idea make sure that you get a queen promoter or manager who knows his way around. To get full use out of a honey queen much organization for interviews, photographs, etc., is very necessary.

Marketing Meetings: Michigan beekeepers held four meetings with Marvin Webster of the Production and Marketing Administration, of Washington, on October 3, 4, 5, and 6. The meetings were fairly well attended and brought out some good discussion on the marketing problems and the government efforts to stabilize the market.

Space permits only a brief report but following are some thoughts gleaned from the meetings:

(1) A surplus of any commodity causes a drop in price.

(2) The government provided the honey export program, school lunch program, diversion program, and finally price support in an effort to remove the surplus and stabilize the price.

(3) Many felt that the packer supported price of 10.1 and 9c set the price for all honey.

(4) Many felt that this price would not keep them in business.

(5) Some felt that a higher support price would further reduce sales and lead to impossible stock piling.

(6) Most felt that support price for honey should not be perpetually pegged at 60 percent of parity. They felt that the directors of the Commodity Credit Corporation should be somewhat more susceptible to representation from the industry asking for variation in the percentage of parity.

(7) They felt that the industry should have a committee available to study the market and make wise recommendations with regard to periodic variations in support price according to what the market might stand. In other words probably support should be 75 percent of parity right now instead of the usual 60 percent.

(8) There was criticism of beekeepers who sell at the same price to wholesaler, retailer, or consumer. Correct mark-ups should be charged.

The meetings did not by any means throb with optimism.—E. C. Martin, Dept. of Entomology, Michigan State College, E. Lansing, Mich.

OHIO, November 1

Weather: September and October are the most colorful months of the year. This fall down in the hills of "Beautiful Ohio" the scenery and color were simply gorgeous. The maples stole the show. Foliage of the oaks and other hard wood trees, due to the drouth, was not so colorful.

September, the transition period between summer and autumn, partakes of the character of both seasons. In history it is known as the "harvest month", and to the beekeeper it should be known as the new or the next year in beekeeping. Before the calendar was revised by Julius Caesar, it was the seventh month and its name is from the Latin septem, meaning seven. When the month was shifted in the Julian calendar to the ninth place in the year, its name was not changed. It has always had 30 days.

October is now the tenth month and in the old calendar was the eighth month. Its name is from the Latin word eight. From the time of Julius Caesar, it has had 31 days. It was in this month that Christopher Columbus discovered America. Wonder what he would think of it if he could see it now. Unfortunately Hallowe'en got into this month and almost causes a shortage of soap and much vandalism is perpetrated.

During these two months the chief beauties consist of the changing foliage. The woods are gorgeous with crimson, russet, and gold, and even the somber pine forests are lighted here and there with the yellow and red torches of stray maples and tulip poplars. This is certainly a nice time of year to be a beekeeper and be out and see the wonderful work of art in nature and enjoy the warm days and cool nights that prevail during these two months. Like Walt Whitman--

"I love to wander through the woodlands hoary,
In the soft light of the autumnal day,
When summer gathers up her robes of glory,
And like a dream of beauty glides away."

Bees and Honey: Bees are going into winter in excellent condition, where they had the proper management in the early fall. In many sections of the state goldenrod and wild aster produced in sufficient quantity to provide enough food for wintering.

The movement of honey at this time is just about on a par with last year with very little price change. A number of new filtering plants have been installed in different sections of the state. A beekeeper who has done or is doing this may discover later that the real problem is selling. After all, the art of selling is the major and most important factor in any and all business—tangible or intangible.

Plant Conditions: Buckwheat and goldenrod nectar flow was over by October first. Buckwheat was not up to par this year and goldenrod was poor in some sections and just medium in other parts of the state. Wild aster nectar flow started late in September and continued through most of October.

Colonies of good strength are now well supplied with winter stores.

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This fall plant (the wild aster) is found only in certain sections of the state in sufficient quantity to be of advantage to the beekeeping industry. Farmers, of course, consider it an obnoxious weed. Even so it produces a goodly amount of humus in the fields of its source.

Young clover plants are in good condition in most sections of the state but additional moisture is badly needed.

Miscellaneous: With the prospect of new taxes increasing the cost of transportation, labor, material, and living for all beekeepers, and with the price of honey virtually the same as the past year, we are inclined to believe that the only extravagance the beekeeper will have will be his check book. In closing we are wondering how many old-time beekeepers will consult a phrenologist and remark—"I have been in beekeeping for many, many years and I would like to have my head examined."—W. A. Coulter, Columbus, Ohio.

GEORGIA, November 7

The main fall flow is over in north and middle Georgia. Bees are working in south Georgia, as there has not been a killing frost. A majority of colonies are in excellent condition for wintering, especially in the queen and package section of south Georgia. Most Georgia beekeepers report their bees in the best condition for wintering in years.

Although the USDA annual report shows a normal record of total number of colonies and honey production, this year's total crop is around 20 percent larger than normal. The following are some of the reasons for this. First, because of the small demand for package bees, approximately 30,000 of the 50,000 colonies normally run for package bees and queens were run for honey. Second, clover acreage for seed, dairy, and cattle production has greatly increased, which has increased the demand for bees for pollination. This, in turn, increased honey production in the clover areas and beekeepers harvested two full honey crops instead of one. Third, it was dry in May and June in south Georgia. Conditions were favorable for palmetto and pepper bush and the largest crop in years was made from these flows.

Beekeepers produced more chunk comb than normal. To date there is the largest carry-over of chunk comb in the history of Georgia beekeeping. There are from 15,000 to 20,000 cases of chunk comb unsold in beekeepers' hands. Beekeepers can not borrow from the Government on chunk comb and there is no provision to sell packed chunk comb to the Government. Beekeepers are concerned because a majority of the chunk comb has not been processed and some of it will granulate before next spring. Three or four processing plants have been set up in a limited way. Recently Georgia beekeepers held a meeting to formulate a State Honey Co-op.

Package shippers have received very few orders or inquiries for 1952. There has been a good demand for beeswax. Some sales are as high as 75c a lb. on white capping wax and 52c to 57c on other wax. Some commercial operators are trying to sell or lease their bees, so they can work in defense plants. Competent bee help is very scarce.

In summary, Georgia beekeepers have had a good production season, with their bees going into winter in excellent condition. The demand for chunk comb has decreased and prices are off $1.00 to $2.00 per case wholesale.—A. V. Dowling, Valdosta, Georgia.

ONTARIO, November 9

Weather: It has been said that Mark Twain once remarked that everyone talked about the weather but nobody ever did anything about it. However, it always provides a ready topic of conversation, which is natural, because it is part of our daily lives 365 days every year, and has more influence on our health and well being than probably any other factor. And so I am going to write a little about the weather.

October was for the most part sunny and warm, a bit of summer transplanted into autumn. I wish you readers who live "way down south" could see our country in October when the wood lots and forests dress themselves in their autumn colors. About the time of the first frosts the leaves begin to color, some varieties of trees later than others so that an area of rolling, tree-clad country will show the white trunks and green leaves of the birches, the yellow of elms and basswoods, the

mottled green and crimson of the maples, and the blood red of the oaks. And thrusting up through these the deep green of pines, spruces, and balsams, make a picture that color-photography fans rave about.

Well, this beautiful weather continued almost till November, then turned cool and cloudy. On November 2nd I had just finished packing a yard at 4 P. M. when snow began to fall. The following morning the ground was covered to a depth of seven inches, and it was cold. Light snow continued to fall for another few days and on the 6th a howling east storm set in with more snow, that turned to freezing sleet during the night, and then to rain. Next morning a dismal scene presented itself. A soggy blanket of wet snow paralyzed traffic all over Ontario. Churches and skating arenas have collapsed under the weight of snow, and in some summer resort areas, cottages are reported to have three feet of snow on the roofs, and some have caved in. The first two weeks of November is open season for deer, and hunting parties may find some difficulty in getting their cars and equipment out of the bush. Several parties from Ohio, Pennsylvania, and New York are hunting in this area. However, today, November 9th, is bright and mild, and much of the snow may disappear, as these winter conditions are about three weeks earlier than in normal seasons.

Honey Crop: Preliminary report on the Canadian honey industry issued by the Dominion Bureau of Statistics shows an interesting trend. Canada's honey crop this year is sharply ahead of last year, the gain being principally due to a higher per colony yield. The number of colonies was down slightly, and the number of beekeepers well below the 1950 mark. This year's crop amounted to 38,748,000 pounds as compared with 28,351,000 in 1950. The number of colonies declined from 430,040 to 420,840, but the average yield rose from 66 to 92 pounds. The number of beekeepers also declined from 22,180 in 1950 to 18,760 in 1951.

Condition of Bees: A few beekeepers whom I have spoken to recently report bees are in good condition. While the crop of amber honey during late summer was not large, a combination of warm fall weather and a small quantity of pollen and nectar through September from minor sources, enabled the colonies to continue brood rearing, and plenty of young bees make up the winter clusters. Winter stores are good quality, as the food chambers are largely filled with good clover honey. Less feeding of sugar has been required than usual.

Miscellaneous: While looking over several small tracts where sweet clover grew wild this year, I noticed that large numbers of seedling plants were growing among the old stalks of this year's crop. I do not know whether these germinated from the current season's crop of seed or from seed that had been lying dormant on the ground. At any rate, if this condition is wide spread, it gives promise of good pasture in 1952, as these seedlings produce next year's crop of bloom. Seedings of clovers on farm lands are greater than in previous years and no doubt some acreage of these will be harvested for seed, providing valuable bee forage.

Locally, honey sales have been steady, but no buying rush is in evidence. Honey seems to move better during cold weather. Prices in the chain stores on honey packed under brand names have not varied in months, although that packed by independent producers has fluctuated, mostly downward. Honey except during wars, seems fated to be a depression-priced product, for what reason it is difficult to determine. Probably it is the attitude of the consumer, that honey is a luxury item. That attitude is no doubt being slowly changed by education. The fact remains, though, that honey prices are 25 percent lower than they were under price control during the war, probably the only food item that has not risen steadily during the past five years. At present prices honey is the most economical food a housewife can serve her family.

When the next issue of Gleanings is published the Christmas season will be at hand, so I will close these notes with the wish that good cheer and happiness may be the lot of all in our two countries, U. S. A. and Canada.—Allan T. Brown, Peterborough, Ont.

WASHINGTON, October 21

Weather: This state has experienced the hottest and driest summer in history. Our rivers were at the lowest stages also, including the mighty Columbia which has

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caused considerable curtailment of electrical energy which supplies many war materials in the state and also in Oregon. However, since the middle of September we have had rain to make up for our summer's shortage and our rivers are back up to or nearly normal.

Honey plants were slow to begin producing nectar. "Fireweed" in this particular district did not produce until the bloom was almost completed, but the last week of this bloom the bees stored water white fireweed honey like I have seen them do for a whole season in years past but it was of too short duration to amount to a normal crop. From 50 colonies I had in one location they averaged 30 pounds per colony.

I kept some 55 colonies in my back yard this season as I have a couple of acres of raspberries and numerous fruit trees which I wanted pollinized. In July I noticed that they were storing heavily an almost black honey but did not know what this was until our State Inspector, J. W. Breedlove of Vancouver, came into my place early one morning. He called my attention to how the bees were working honeydew from some improved walnut trees on my place. This kept up until the latter part of August and at this time I have about 3000 pounds of this dark stuff which is not salable. Although the flavor is not too bad the color is something I have never seen before.

The honey market in this particular locality is very slow except on a good grade of comb honey, and the price is somewhat lower than it was a year ago. Beeswax is bringing a good price and is higher than a year ago.

American foul brood here has been greatly reduced in the past ten years. Mr. Breedlove advises me he finds some cases now and then but not too often. In 1939 this writer was assistant to the inspector for this district (Mr. Horst) and in July and August of that year we inspected bees in this county and if I remember correctly, we visited only a couple of places where A.F.B. was not prevalent. One yard of 62 colonies had only one clear of it and it probably showed up the next spring as it was a swarm he had gotten that summer, so this report shows quite some improvement. We have a state law requiring every person keeping one or more colonies to report to the county agent's office. By this method the inspector can keep up with the ones that do not know what it is. I find that the resistant queens do a lot to help keep it under control.—Walter Evans, Longview, Wash.

VIRGINIA, Nov. 10

Weather: A light rain fell a few days ago here in the Piedmont section of Virginia. Before this rain pastures were drying up and clover looked very badly. Fall flowers failed to produce very much. Things look better now. Clover is beginning to show again in the pastures. On the whole for the year, we have had good weather for beekeeping, and we made one of the best crops we have had in several years. There was very little dark honey. We even got a good flow from sourwood in the mountain section of the state. This good crop has made many of the beekeepers who were about to loose heart want to increase their colonies.

Honey Market: Beekeepers who were lucky enough to get sourwood honey have about sold out at a fancy price. On the whole honey has sold very well. It has gotten so that it does not take so much salesmanship to sell honey, but it is necessary to put up a nice pack and get there a day before the other beekeeper does. I was told by one beekeeper today who made over 50,000 pounds that he had just packed and sold his last lot.

Condition of Colonies: Bees are in better shape than they have been in a long time. I looked at an apiary today of about 75 colonies. They were so heavy it seemed as if they were nailed down. Little feeding will have to be done unless we have a very bad spring.

Miscellaneous: Under the supervision of John Amos, Extension Entomologist, Blacksburg, several of the counties are setting up bee associations. One was organized in Hilton Village, on October 29. It will be known as The Tidewater Beekeepers' Association. It will take in 25 of the Eastern Counties. R. H. Wample 332 45th St., Newport News, is its President.—Henry W. Weatherford, State Bee Inspector, Vernon Hill, Va.

WESTERN COLORADO, Nov. 13

Weather: Western Colorado is still dry, terribly dry. The few rains we are having merely wet the surface and are evaporated before more falls. We have fenced some apiaries lately and have had a sewer line dug and one need only see the powdery condition of the subsoil to know why many of the best springs in the country are gradually drying up. We need expect no more good crops until we get more moisture. Even though this is an irrigated country, the clovers and alfalfa on the waste land, along the fence rows and in the uncultivated spots are what keep our bees going between the hay crops in the irrigated fields.

Crop: As could be expected, the crop in Western Colorado was again quite short.

Condition of Bees: Odd as it may seem, most bees are in excellent condition. The fall was ideal for the gathering of nectar and pollen from the rabbit brush and other fall flowers and those colonies that escaped European foulbrood or succeeded in cleaning it up went into winter in fine shape both as to stores and young bees. European foulbrood cost us another 148 colonies this year, not to mention the crop that they should have made. We have not made it a policy to advertise our losses from this disease in the past, but perhaps it is time to do so. The old methods of control have failed us miserably, and to this day no one seems to know how the disease spreads. The West has been hit by it with increasing intensity for 12 years now that I know of. At least my first epidemic of it was in 1940. At that time it was taken rather lightly by the authorities, but as the spread becomes wider and more than the Intermountain West are affected, more efforts may be taken to learn the facts about the disease which are a puzzle to both scientist and beekeeper alike. The fact that it may disappear as mysteriously as it comes is all that saves us, although it may help to confuse us as well. Our own control methods are as unorthodox and unpredictable as the disease itself and no one would be expected to follow them. We have one ironclad rule; we winter no colony that shows a trace of the disease when the last honey is taken off.

Market: There is no telling what the market would have been had it not been for price support. As it is, however, the market is 10.1c for the better grades, and 9c for honey of limited acceptibility. Especially on the better grades the price program has acted as a ceiling as well as a floor in this area. And "this area" seems to be pretty wide. It still looks to me like the loan type agreement would come much nearer to giving the commercial producer what he needs as well as keeping more honey in the regular channels of trade. Like Bruce Morehouse who reports from Minnesota, I believe that unless we are able to get more than 10c for honey we are all going broke or going out of business. Some of us are holding our own by hiring the minimum of help and working ourselves beyond our limits. We buy no new equipment, have not for several years, and cannot as long as honey is 10c and new hive bodies are $2.00 — and eggs are 78c, and everything else is in proportion.

When we went to Washington last February we asked for 12c or 75 percent of parity. It was our contention that that was the lowest level on which beekeepers could make a decent living. It is still my contention that we can survive on no less. But we only got 60 percent. If commercial beekeeping is to have any future we are going to have to raise the price of bulk honey to the producer.—John W. Holzberlein, Jr., Meeker, Colorado.

Weight of Honey

A cup of honey weighs 12 ounces of which not quite 1/5 is water.

A cup of sugar weighs about 7 ounces.

In a cup of honey there are approximately 9¼ ounces of sugar.

In a cup of sugar there are 7 ounces of sugar.

Honey, then, contains a little more sugar than the same measure of cane sugar.—American Honey Institute, Madison, Wisconsin.

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Just News

Southern States Beekeeping Federation Program

December 3 and 4 1951 at Texas A & M. College, College Station, Texas

8:30-9:00	Registration
9:00-9:15	President's address, — L. H. Little, Pres.
9:15-9:30	A. W. Bulay—Cost of Producing a Pound of Honey
9:30-9:45	Dr. A. H. Alex—Pollination Experiments
9:45-10:00	Chas. Engle—Migratory Problems
10:00-10:15	Raymond Fischer—Preparing Honey for the Market
10:15-10:30	F. E. Jackson—Packer-Producer Relationship
10:30-10:45	Dr. Warren Whitcomb, Jr. —Increasing Bee Production
10:45-11:30	Panel Discussion — "Do We Need Price Support?"—J. D. Beals, Will O. Victor, N. C. Jensen, Roy Weaver
11:30-11:45	E. C. Bessonet—Commentary
11:45-12:00	J. W. Newton—Do we Need Research on Nosema?
	Recess for Lunch
1:30-1:45	T. E. Burleson—Our Responsibility Towards the Institute
1:45-2:15	Mrs. Harriett M. Grace—American Honey Institute
2:15-2:30	L.A.M. Barnette—Problems of Small Beekeeper
2:30-2:45	Harvey York, Jr.—Chunk Honey Production
2:45-3.00	J. H. Davis—Control of Bee Diseases
3:00-3:15	Edwin Lott—What Can a State Do for Beekeepers?
3:15-3:30	Dr. F. L. Thomas—Can Regulations be Enforced?
3:30-3:45	J. F. McVay—How Honey Producers Can Co-operate with A.B.B.A.
3:45-4:00	Jas. I. Hambleton—Can Beekeepers Survive?
4:00	Questions and Answers from the floor under direction of Paul Cutts

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California State Beekeepers' Association to meet Dec. 4, 5, 6

Our apologies for last minute changes in the site and dates for our annual convention, but they were necessary to secure adequate facilities at reasonable cost. **Final** arrangements have been made for the convention at **Hotel Asilomar, Pacific Grove**, on **December 4, 5, and 6**, starting with registration at 9:00 a. m. Your president, Sam Moore, states that it is the most interesting place to be selected in years.

The program will center around the general theme of Greater Efficiency in Beekeeping and will include panel discussions of colony management, improved strains of bees, honey house management and equipment, honey marketing and honey processing, final details on the Honey Marketing Order, pollination problems, management of colonies for pollination, insecticide problems, our government programs, and other topics which may be introduced by attending beekeepers and handlers.

Hotel facilities: Hotel Asilomar is essentially a conference site used by many organizations. It is located by the sea, in a colorful section of the state, and has all modern facilities for your comfort. It is run on the American plan with the rates per person from $5.25 to $6.75 per day, for **room and board.** It will be a great convenience for those who expect to attend to make reservations. No down payment need be made with the reservations. The hotel should know the number to prepare for in advance of the first luncheon. The conference can take care of between 400 and 500 guests, **so make your reservations early** to Sam Moore, 2436 North Street, Redding.

Honey samples, of specific floral sources, in lots of 2 pounds, will be needed for the honey tasting contest. Bring these samples with you, as many as possible. Moisture content and color grades will be determined, if desired, but bring the samples and enter the contest.—A. K. Whidden, Sec'ty-Treas.

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The next regular indoor meeting of the **Middlesex County Beekeepers' Association (Mass.)** is to be held at the University of Massachusetts Field Experimental Station at Waltham, Mass., on December 29 at 6:30 P. M. when a Christmas Program will be held. Beekeepers in the vicinity are invited. An educational period of questions and answers by our new panel of experienced beekeepers should prove of great interest to new and old-time beekeepers. —John H. Furber, Sec.-Treas.

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All beekeepers are invited to attend the Annual Convention of the **Empire State Honey Producers' Association** to be held in Bibbins Hall at Ithaca, N. Y., on December 13 and 14. Convention highlights will be talks by E. A. Hogarth, outstanding commercial beekeeper from Ontario, Canada, panel discussions on honey production problems, and talks on all phases of honey mar-

The annual meeting of the American Beekeeping Federation will be held in Dallas, Texas, on January 16, 17, and 18, 1952. More information concerning the program will appear in the January issue of this magazine. The above picture is a view of beautiful downtown Dallas, looking east on Main Street. Photo courtesy Dallas Chamber of Commerce.

keting. Speakers who have been invited to participate include Marvin Webster of Washington, D. C., Charles Mraz of Vermont, Frank Shaw of Massachusetts, Mrs. Harriett Grace of the American Honey Institute, R. B. Willson, Burel Lane, and many others. Last but not least there'll be a banquet plus an evening of entertainment. Bibbins Hall, owned by G. L. F., is equipped with an excellent sound system which enables everyone in the room to hear. Ample parking space is provided across the street; restaurants and overnight accommodations are near.

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The **St. Clair Beekeepers' Association** will hold the December meeting on Wednesday December 5th in the County Highway building at 8 P. M., Belleville, Ill. It is expected that a report will be made as to the results of the state meeting. There will be a good speaker and valuable workable ideas on beekeeping will be discussed. — Leiper-Hankamer, Program Committee.

The newly-organized **Logan County (Ohio) Beekeepers' Association** held its second meeting on Nov. 9, at the home of Mr. and Mrs. Albert Claggs, Bellefontaine, Ohio. A nice crowd turned out and the following officers were elected: President, Richard Livermore, Belle Center, Ohio; Vice-president, Jim Connor, Belle Center, Ohio; Sec.-Treas., Mrs. N. B. Kelley, Bellefontaine, Ohio. This new association was formed largely through the efforts of Mr. Richard Livermore, a young beekeeping enthusiast. This is the second association Mr. Livermore has organized.

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"Honeybees and Their Management" is the title of a new book by Dr. Frank R. Shaw and Stanley B. Whitehead. Dr. Shaw, Assistant Professor of Entomology and Beekeeping at the University of Massachusetts, and Stanley Whitehead, one of the best known English writers on bees, have cooperated in

(Continued on page 752)

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1951 Honey Production and Stocks on Hand Sept. 15 for Sale

From Oct. 12 Report of Agricultural Economics, U. S. Dept. of Agriculture

State and Division	Colonies of bees 1950*	Colonies of bees 1951†	Yield per colony 1950	Yield per colony 1951	Honey Production 1950	Honey Production 1951	Honey for sale producers' hands on Sept. 15, 1951
	Thousands		Pounds		Thousands		Pounds
Maine	8	8	16	22	128	176	35
N. H.	5	5	26	28	130	140	77
Vt.	10	10	30	47	300	470	212
Mass.	31	31	18	22	558	682	239
R. I.	2	2	23	23	46	46	18
Conn.	20	17	22	21	440	357	143
N. Y.	215	209	42	56	9,030	11,704	5,618
N. J.	39	31	24	18	936	558	184
Pa.	194	180	24	33	4,656	5,940	2,614
N. A.	524	493	31.0	40.7	16,224	20,073	9,140
Ohio	311	295	37	42	11,507	12,390	6,567
Ind.	175	170	35	49	6,125	8,330	4,165
Ill.	184	167	42	40	7,728	6,680	3,474
Mich.	192	192	52	57	9,984	10,944	6,238
Wis.	185	194	65	71	12,025	13,774	8,540
N. C. E.	1,047	1,018	45.2	51.2	47,369	52,118	28,984
Minn.	275	283	85	80	23,375	22,640	9,962
Iowa	211	198	82	55	17,302	10,890	5,227
Mo.	188	184	25	15	4,700	2,760	718
N. Dak.	13	15	125	130	1,625	1,950	819
S. Dak.	15	17	104	104	1,560	1,768	760
Nebr.	44	43	90	75	3,960	3,225	1,290
Kans.	61	60	44	28	2,684	1,680	840
N. C. W	807	800	68.4	56.1	55,206	44,913	19,616
Del.	3	3	25	25	75	75	19
Md.	32	29	20	20	640	580	232
Va.	159	157	19	29	3,021	4,553	1,548
W. Va.	127	123	17	19	2,159	2,337	818
N. C.	185	189	15	34	2,775	6,426	1,285
S. C.	55	58	12	17	660	986	345
Ga.	205	215	21	27	4,305	5,805	2,032
Fla.	208	218	78	82	16,224	17,876	10,368
S. A.	974	992	30.7	38.9	29,859	38,638	16,647
Ky.	169	152	14	15	2,366	2,280	547
Tenn.	181	167	11	22	1,991	3,674	845
Ala.	194	200	17	17	3,298	3,400	850
Miss.	73	73	11	26	803	1,898	626
Ark.	92	86	15	27	1,380	2,322	557
La.	96	95	20	22	1,920	2,090	1,087
Okla.	58	56	28	25	1,624	1,400	518
Tex.	317	304	50	36	15,850	10,944	3,283
S. C.	1,180	1,133	24.8	24.7	29,232	28,008	8,313
Mont.	62	65	60	80	3,720	5,200	3,068
Idaho	177	184	42	52	7,434	9,568	3,062
Wyo.	31	34	63	86	1,953	2,924	1,696
Colo.	73	68	52	65	3,796	4,420	2,652
N. Mex.	19	17	50	35	950	595	190
Ariz.	68	73	78	77	5,304	5,621	2,810
Utah	49	51	51	66	2,499	3,366	2,087
Nev.	13	14	58	64	754	896	573
Wash.	76	78	53	51	4,028	3,978	2,546
Oreg.	61	65	35	30	2,135	1,950	975
Calif.	451	487	50	55	22,550	26,785	12,321
West.	1,080	1,136	51.0	57.5	55,123	65,303	31,980
U. S.	5,612	5,572	41.5	44.7	233,013	249,053	114,680

*Revised †Preliminary

Asked & Answered

Heating Honey Leaving the Extractor

Question: I am interested in heating honey as it leaves the extractor. I would appreciate your advice in reference to the most practical method. What temperature would you recommend for the extracting room?—J. W. Grady, N. Y.

Answer: There are a number of methods of heating honey as it leaves the extractor. Perhaps the most satisfactory plan of all is to use a coil of aluminum pipe, if you can get it, into which your honey from the extractor is pumped. This coil can lie in a tank of water heated by gas or oil or gasoline stove. The coil should be made so that the honey will drain out perfectly and there should be a valve at the bottom of the tank of water to draw off the hot water as soon as you are through extracting. Otherwise, there is danger of overheating the honey still in the coil. Aluminum is the most satisfactory metal to use but you need the pure aluminum in order to have it soft enough to bend into a coil. Tinned copper is all right if you can get copper pipe that is tinned on the inside. This, we are afraid you would not be able to purchase now. Much depends upon the volume of honey that you wish to heat. If the volume is not too great, you might purchase a jacketed kettle from some dairy equipment supply house, and heat the honey in a batch either with steam or hot water in the jacket of the kettle. This will require more or less constant stirring with a wooden paddle to prevent unequal heating. The warmer the extracting room the shorter the time in the extractor, but of course there is danger of having the room so warm that the combs are injured. Except for new combs this seldom makes much trouble. Anything between 80 and 90 degrees F. is considered ideal.

Killing Bees with Cyanogas in the Fall

Question: I have only three colonies, for my own amusement and pleasure, but one of my colonies has been so mean all summer, that I hate to go near it, even when fully dressed for the occasion. If I killed this colony with Cyanogas, what happens? Is the uncapped honey all right to leave in the hive for the new package bees to take over?—Cyrus Woodman, Me.

Answer: When killing off colonies in the fall and starting with package bees the following spring, it is customary to remove the queens from such colonies during August or possibly September, depending on the latitude. It is necessary to check the combs about nine or ten days after the queens are removed in order to destroy queen cells. If this is overlooked the bees may rear young queens. There being no queens in the hives, all of the brood in the combs will eventually emerge. Pollen collected by the bees will be stored in cells of the brood combs to be used for brood rearing next spring. When cool weather sets in at the end of the fall honey flow, the bees may be killed by Cyanogas and later the dead bees may be removed from the hives. The hive entrances should be closed tightly to keep out mice during the winter months. In fact, hives should be stored in a building until spring at which time they are set out again and package bees installed in the hives. Cyanogas properly applied does not make the honey in the comb unfit for bee food or human consumption. About a tablespoon of Cyanogas is placed on the stiff cardboard paper at the entrance of the hive, then the paper is pushed into the entrance underneath the frames. The bees are destroyed almost instantly as the gas travels up, being lighter than air. If you decide to try out this method of killing bees in the fall and stocking the hives with packages next spring, let us know how you come out. The weather gets very cold in your state during the winter and the procedure indicated might work to advantage.

Melting Wax in Aluminum Pan

Question: Does the melting of beeswax in aluminum pans affect the color and quality?—Stephen Radford, Washington, D. C.

Answer: There is almost no effect on beeswax from melting it in aluminum receptacles. At the same time, one should be careful never to let the temperature of the wax get above that of boiling water.

Bees Do Not Like Molasses

Question: I have six colonies of bees that will need to be fed this fall. I also have quite a bit of stock molasses on hand. Would it be all right to feed this molasses to them if they would take it?—C. W. Robinson, N. Y.

Answer: It is doubtful if your bees would take molasses if fed to them. We tried this some time ago but without success.

JUST NEWS

(Continued from page 749)

the production of a book especially for beginners and small beekeepers in which the best practices of England and America are combined. The book is also a happy combination of the scientific and practical, every page of which interests the small beekeeper. The writers have drawn copiously from the best literature of the day on bees and beekeeping and the resulting book is one, not only interesting but easy to understand. The book has 165 pages, more than 60 beautiful illustrations, and sells for $3.50.

* * * * *

The **Minnesota Beekeepers' Association** will meet in the St. Francis Hotel, St. Paul, Dec. 4th. Discussions will get under way at 9 A. M., and close with a banquet in the evening. Marketing, manpower, and morale will be the major emphases. —Clarence G. Langley, Sec.

* * * * *

The annual Colorado Beekeepers' Association meeting is scheduled for December 10th and 11th at Auditorium Hotel, Denver. Honey Marketing and EFB Control are among the more important subjects to be considered.—Vernon C. Culhane, Sec'y.

The next monthly meeting of the **Essex County (Mass.) Beekeepers' Association** will be held at Extension Hall, Saturday, December 8th. —Charles H. Greenwood, Sec'y. & Treas.

* * * * *

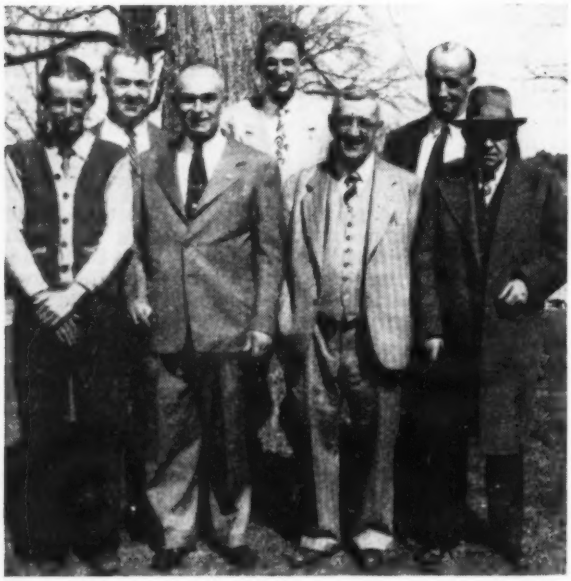
The annual fall meeting of the Kansas State Beekeepers' Association was held at Wichita, Kansas, Oct. 14, 1951. The following officers were elected: President, M. C. Mitchell, Altoona, Kansas; 1st Vice Pres., Mr. Wilson, Leon, Kansas; 2nd V. Pres., Geo. Pratt, Topeka, Kansas; 3rd V. Pres., R. F. Denny, Colony, Kansas; 4th V. Pres., D. R. Meredith, Tonganoxie, Kansas. The Sec'y-Treas. Will T. Roberts of 6126 Parallel, Kansas City was re-elected.—Will T. Roberts, Sec.-Treas.

* * * * *

The winter business meeting of **Ohio State Beekeepers' Association** will be held in Hearing Room No. 3, State Office Bldg., Columbus, Ohio, Monday December 17, beginning at 9:00 A. M.

* * * * *

Clifford H. Denny, Ravenna, Ohio, well known beekeeper and honey packer, as well as an orchardist, died on Oct. 31. He leaves a wife, a son, and three grandchildren.



New Hampshire Beekeepers at the home of Cameron Paine, of Westmoreland, N. H.

Front row: Robert Mead, Clyde Wood, Prof. J. R. Hepler, Henry J. Holt.

Back row: Laurence C. Rising, Paul B. Mc Knight, Cameron Paine.

Edwin B. Gladish, President of the Leahy Manufacturing Company, Higginsville, Missouri, departed this life October 25, 1951, after a 15-month illness following a serious operation August 24, 1950. He was 87 years of age at the time of his death, having spent 63 years of that time with this Company.

He was a farmer's son spending his boyhood days in the country, later attending school and being one of the first graduating class of Wentworth Military Academy of Lexington, Missouri. Later he came to Higginsville and interested himself in machinery for about three years, then becoming a partner of R. B. Leahy, founder of the Leahy Manufacturing Company, and in 1905 purchased Mr. Leahy's stock. For the past 31 years he had been President and General Manager of the Company. He designed and built many of the machines used in this business. His character was above reproach; he bent his very effort toward furthering the best interests of the Company and was noted for his honesty, integrity, and sound judgment in business dealings. His loss is keenly felt by his friends and associates as well as by his family.

The Indiana Beekeepers' Meeting October 27

This meeting which was well attended and worthwhile, was called to order by Pres. Walter R. Bielfield.

The production and selling of chunk honey was presented by L. R. Stewart of Newport, Indiana. In the production of chunk honey the requirements necessary for producing other types of honey must be present, namely, young queens, very populous colonies, and intelligent management which includes supering at the proper time. The honey in shallow frames should be removed before it becomes travel-stained and to avoid having too many cells of pollen in the combs of the supers. Mr. Stewart emphasized the importance of having each colony headed by a prolific queen, because more of the incoming pollen would then be used for brood rearing and less is stored in the cells of the supers above. This is something we had not thought of. Full sheets of thin super foundation should be used, not one inch starters.

The packing of chunk comb honey is a little difficult because the

(Continued on page 760)

Illinois Honey Queen

Miss Marlene Born of Joliet, Illinois, was elected Queen of the Illinois State Fair and Honey Queen. She was presented with 116 pounds (her actual weight) of honey by Illinois beekeepers, and Carl Killion is checking her weight.

Buy and Sell

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 15c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Onsted, Michigan.

NEW CROP of honey shipped daily from producer in Florida. Pure orange blossom, 5 lbs., $2.25; Pure Florida cut comb honey, 5 lb. pail, $2.75. No C.O.D. orders. All shipments prepaid. E. R. Raley, Daytona Beach, Florida.

ANY GRADE—Any amount. Alexander Co., 819 Reynolds, Toledo, Ohio.

BUCKWHEAT HONEY in new 60-lb. cans, 10 cents per pound. E. G. Kyte, Fairview, Pa.

700 new 60's of delicious clover honey. Sample 20 cents. John Burghardt Apiaries, 1111 N. Franklin, New Ulm, Minn.

FANCY CLOVER comb and extracted honey for sale in any quantity. Case Apiaries, Robert Case, 218 Bristol Street, Canandaigua, N. Y. Phone Canandaigua 552 R.

HONEY, WHITE, predominantly clover, strained and heated, ready for bottling. Good clean honey in new sixties, 16c per lb. 5 sixties or more, 15c per lb. FOB Louisville, Ky. Lose Brothers, Inc., 206 E. Jefferson St., Louisville 2, Ky.

IOWA Honey, one can or truck loads. Russell D. Smalley, Beaver, Iowa.

AMBER, light amber and white honey in new 60 lb. cans. Norman Ellis, Caro, Michigan.

ORANGE, Palmetto, and Mangrove honey in new sixties. Peter W. Sowinski, Fort Pierce, Florida.

EAST TENNESSEE MOUNTAIN HONEY, mostly sourwood. Bulk comb, 6 5-lb. jars, $9.50; 12 2½-lb. jars, $9.75; 12 2-lb. jars, $8.50. Fred Brock, McDonald, Tenn.

TRUCKLOAD of clean, 1st class, mild honey in new 60's. Too good to sacrifice, but name your price. Wayne Keller, Oshkosh, Nebraska.

STOLLER'S fancy clover honey in new sixties. Stoller Honey Farm, Latty, Ohio.

CLOVER extracted honey in sixties. Abram Brubaker, Lancaster, Pa., Rt. 1.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on COD terms except where the buyer has thoroughly established his credit with the seller.

CASH FOR YOUR HONEY—Light extracted or comb. Regular trade send sample. 60 lb. cans furnished if desired. W. R. Moomaw, Stone Creek, Ohio.

CASH FOR BEESWAX. Write as to quantity and we will quote price. Muench-Kreuzer Candle Co., Inc., Syracuse, N. Y.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & Company, 1360 Produce St., Los Angeles 21, California.

ALL GRADES HONEY AND WAX WANTED—Mail samples, advise quantity and cash prices delivered to us. HONEY SALES COMPANY, 1808 NO. WASHINGTON AVE., MINNEAPOLIS 11, MINN.

CARLOADS or less of honey and wax. Send sample and price. Alexander Company, 819 Reynolds, Toledo, Ohio.

WANTED — White and amber honey. Any amount. D. F. Treap, R. D. 3, Box 222, Kent, Ohio.

WANTED—EXTRACTED HONEY — Clover or light amber. C. H. Denny, Rt. 4, Ravenna, Ohio.

HONEY AND WAX WANTED — Mail sample. Advise quantity. BRYANT & SAWYER, 2425 Hunter St., Los Angeles 21, California.

CASH for your comb honey and all types extracted. Send sample and best price. Buckeye Honey Co., 3930 No. High St., Columbus 2, Ohio.

BEFORE YOU SELL your clover honey contact us. Send samples and tell us how much you have. The Delaware White Clover Apiaries, 139 West William St., Delaware, Ohio.

WANTED—Aster honey. Send sample and price. Robt. W. Lane, Greeneville, Tenn.

WRITE FOR shipping tags and quotations on rendered beeswax. We buy from one pound up and if you have over 25 pounds let us work it into foundation for you at a 25 percent saving. Walter T. Kelley Co., Paducah, Kentucky.

WANTED — White extracted or comb honey. Send sample. Millersport Honey Co., Millersport, Ohio.

WANTED — All grades of honey, one can to a carload. Send sample, state price in first letter. We exchange sixty lb. cans. Cash on delivery. Honeymoon Products Co., Box 85, River Rouge 18, Mich.

FOR SALE

Standard 10-frame bee equipment for one or a thousand hives. Russell D. Smalley, Beaver, Iowa.

We carry a full line of ROOT QUALITY Bee Supplies. Prairie View Honey Co., 12303 12th St., Detroit 6, Mich.

WRITE FOR CATALOG — Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies and Comb Foundation. Onsted, Mich.

The only comb foundation plant in the East. We sell foundation, work your wax, render combs and cappings. Robinson's Wax Works, R. D. 3, Auburn, N. Y.

BEE SUPPLIES of all kinds. Catalog free. Hodgson Bee Supplies, Ltd., 565—13th Ave., New Westminster, B. C., Canada.

YOUR WAX WORKED into quality medium brood foundation for 23c pound; 100 pounds, $18.00. Fred Peterson, Alden, Iowa.

THE BIGGEST BEE SUPPLY Catalog published (64 pages) free for the asking. Listing many items not found in other Catalogs. No agents—buy direct and save 20%. WALTER T. KELLEY CO. PADUCAH, KENTUCKY.

BEE SUPPLIES—Tin packages; 10 sizes glass jars; paper shipping supplies; window cartons and other items. Roscoe F. Wixson, Dundee, N. Y.

FOR SALE: 50 colonies of Italian bees with 1½ to 3 stories — each fairly new, $7.00 each. Boyd Love, 244 Barrett Place, San Antonio, Texas.

BEES FOR SALE—400 colonies or less, 10-frame, two supers, $12.00. Can be left on locations for early honey and increase. H. A. Franke, Uvalde, Texas.

BEES AND QUEENS FOR SALE

We use all possible care in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold or if dissatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

CAUCASIANS—Booking orders for 1952. Lewis & Tillery Bee Co., Route 1, Box 280, Greenville, Ala.

BEES FOR SALE AND LEASE—Montana, Wyoming, Idaho, Nebraska. Contact Bradshaw & Sons, Wendell, Idaho.

YANCEY HUSTLERS for 1952—Packages and Queens, ready April 1st. Three-band Italians, bred for business. Overweight packages; spring-reared queens; all guaranteed to please. Caney Valley Apiaries, 2500 Nichols Ave., Bay City, Texas.

HONEY LABELS

Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.

C. W. AEPPLER COMPANY

Oconomowoc, Wisconsin

Michigan Headquarters for

Root QUALITY

Bee Supplies

Complete Line of Bee Supplies and Honey Containers
Prompt Service

Michigan Bee and Farm Supply

510 N. Cedar St.
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Wisc. No. 1 White Honey

100% Pure Filtered
Write for future information.

Fox Valley Apiaries

DePere, Wisconsin

HONEY WANTED

Carloads and less than carloads. Mail sample and best prices in all grades.

C. W. AEPPLER COMPANY

Oconomowoc, Wisconsin

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BETTER HURRY!

RUSH those orders for Caucasian or Italian Queens in right away and we will rush them right back to you. Late fall is a good time to requeen.

-Prices-

1 - 24	$ .75 each
25 - 99	.70 each
100- Up	.60 each
Tested Queens	1.50 each

Airmailed and/or Clipped
No Extra Cost

The Stover Apiaries

Mayhew, Miss.

John M. Davis Strain
Italian Queens

1-24	24-up
$1.25	$1.20

Daughters of ABBA
Tested Stock

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$1.50	$1.40

LITTLE APIARIES
Shelbyville, Tenn. P. O. Box 122

Book early for those—1952—personal reared Caucasian queens.

Howard Weaver
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Canada's
National Monthly Magazine
for Beekeepers

Canadian Bee Journal
54 Bloor St. W., Toronto 5, Ont.

U. S. Subscription Price,
only $1.75 per year.

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PELLETT CLOVER—root divisions for trial, 25, $2.00; 100, $5.00, postpaid. Everflowering locust trees (Robinia semperflorens). Illustrated HONEY PLANT CATALOG on request. Pellett Gardens, Atlantic, Iowa.

NOTICE—Our 1952 Honey Plant, Shrub, and Tree catalog being unchanged since last year, will not be mailed unless requested by you. Those wishing to order can use last year's catalog, prices being same. New item list on request. NICOLLET COUNTY NURSERY, St. Peter, Minnesota.

MISCELLANEOUS WANTED

WANTED to trade 2-lb. package bees for shallow supers and frames. D. P. Green, De Land, Rt. 2, Fla.

HELP WANTED

Man with some queen experience. Year around work. Walter D. Leverette, Box 364, Fort Pierce, Fla.

Man to operate outyards in the South for package bees. Must be honest, sober, able to assume responsibility, and good worker. State age, experience, wages expected. All replys confidential. Reply Box 4, care Gleanings, Medina, Ohio.

MAGAZINES

WESTERN CANADA BEEKEEPER—Official organ of the Manitoba Beekeepers' Association. One year, $1.50; two years, $2.25; three years, $3.00. In combination with Gleanings in Bee Culture, $2,75. 211 Affleck Bldg., Winnipeg, Canada.

THE BEE WORLD, international and scientific journal on bees and beekeeping, with apicultural abstracts. Monthly, including membership in the Apis club, $1.75 per annum. Specimen copy 12c U. S. postage stamps, from The Secretary, The Way's End, Foxton, Royston, Herts, England.

Read the South African Bee Journal. Published every two months. Subscription 7/6 per year to the Treasurer, P. O. Box 3306, Cape Town, South Africa.

Know interesting facts concerning the bees of India through the INDIAN BEE JOURNAL, published in English by the Bhupen Apiaries (Himalayas), Ramgarrh, Dist. Naini Tal, U. P., India, or available through them. Subs. Rs7/ or 10 shillings or 2.25 dollars per annum. Single copy, Rs ¼s. 1/9 or 40 cents (International Money Order). Payment in mint postage stamps of your country accepted.

DO YOU FIND it difficult to secure information about sheep and sheep ranching methods? The SHEEP AND GOAT RAISER reaches more sheepmen with more information on range sheep than any other magazine published. Subscription $1.00. Hotel Cactus, San Angelo, Texas.

PROTECT YOUR FUTURE. BUY YOUR SAVINGS BONDS NOW.

Thanks to our many customers for business given us this year.
We are looking forward to serving you next year.

Calvert Apiaries **Calvert, Alabama**

BEE LINES TO THE EDITOR

(Continued from page 708)

other story. Why is it that the good honey we sell for 8 or 9c in 60-lb. cans is anywhere from 25 to 30c per pound in small containers on grocery shelves? No wonder some people say honey is a luxury and is too high or expensive for poor people to buy. I feel with sufficient good and honest packers who will buy most of the honey from the honey producers and do the packing themselves and do the selling themselves to the retail trade at a reasonable profit we will be on the right track. It's a fact, in my opinion, honey is too high in some retail stores."—A. H., Texas.

* * * * *

"Bees in the best condition for winter, 50-lbs. average comb honey per hive. The most clover that I have ever seen in my 48 years keeping bees."—A. W. H. Kansas.

WES OSBORN SEZ

"Well folks, what do you know, I'm getting short on that tangy, zestful flavored dark honey that's best for eatin'. Who will sell me some heartsease honey? Will buy light amber honeys, also the mild, tasty-sweet light honeys. Any deal we may make must be such that we will be ready to deal again, or I won't deal. Would like to have enough of a sample to determine color and moisture content, and amounts you will sell me. Tell me the price you will take, not the price you would like to get and I would like to pay, and I will accept or refuse promptly. Cash on delivery, of course."

WESLEY W. OSBORN
Box 22 Hillsboro, Illinois

FOR SALE

OTHER BUSINESS interests force retirement from commercial honey production. Will sell immediately—honey route consisting of several hundred stores, stands, bakeries, etc., for cost of inventory plus $400.00 for vacuum bottling equipment. Will also sell between now and August 1, 1952, 18 apiaries scattered over 185 miles front, including some extracting and producing equipment, and many extras. Bees will be inspected when weather permits. Equipment is ten frame. Price dependent on time of sale. Orchard rentals possible. Stevens Apiaries, Oberlin, O.

OLDEST BEE JOURNAL IN THE ENGLISH LANGUAGE

Keep up on markets, practices, scientific data, regulations, and plant possibilities.

1 year, $2.00, U. S. and Canada
Foreign postage, 50c a year extra

AMERICAN BEE JOURNAL
Hamilton, Illinois

Wishing You a MERRY CHRISTMAS

May the Christmas Season
bring you happiness
and pleasures supreme.

When the time comes to order Package Bees let us help you by supplying your needs. We will feature KELLEY'S ISLAND HYBRID queens again in addition to our own regular stock.

Club your orders with your neighbors and pick up your packages by truck. You will be surprised at the saving on express.

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If you are taking time to read, why not read the best? Condensed to save you time. Illustrated to give you pleasure.

Modern Beekeeping
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Australasian Beekeeping News
The Leading Bee Journal of the Southern Hemisphere is the
"AUSTRALASIAN BEEKEEPER"
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Lansing 17, Michigan
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One Year, $2.00
Three Years, $5.00
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Queens Our Specialty

Italian, Caucasian, and Carniolans

Three Isolated Mating Yards to Prevent Mixing Breeds

ITALIANS	$1.00 each
Caucasians	1.10 each
Carniolans	1.25 each

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All Queens shipped by Air Mail and guaranteed to please.

Walter D. Leverette Apiaries

Box 364 Fort Pierce, Florida

Your choice of Two Outstanding Strains:

Queens:	"Magnolia State" Italians	Dadant "Starline" D. R. Hybrids
1-24	95c each	$1.20 each
25-99	85c each	1.10 each
100-up	75c each	1.00 each

Clipped and Marked Free

Jensen's Apiaries

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Package Bees and Queens for 1952

Best Quality Italians Only.

Order early.

Geo. A. Hummer & Sons

Prairie Point, Miss.

Est. 1892

Package Bees and Queens

Jackson Apiaries

Funston, Georgia

HOLIDAY SWEETS

(Continued from page 727)

can be held comfortably on the bottom of the pan. Then beat until candy holds its shape. Turn on board dusted with ½ cup powdered sugar. Knead until firm. Shape into long roll, about 2 inches in diameter and 16 inches long. Cover outside with 1½ cups of broken pecans. Wrap in waxed paper and put in cool place to harden. Slice with sharp knife.

Honey Toffee

One-half cup brown sugar, ½ cup granulated sugar, ¼ cup honey, ½ cup evaporated milk, 1 tablespoon butter, and ¼ teaspoon salt.

Combine, mix thoroughly and boil slowly, stirring constantly until sugar dissolves. Continue cooking, stirring occasionally, to hard ball stage, 250 degrees F., or until a few drops form a hard ball when dropped into cold water. Add 1 teaspoon vanilla and ½ cup chopped nuts (optional). Pour into greased pan, 8 inches square. Cut into strips when cool and wrap in waxed paper at once.

QUEENS

YORK'S QUALITY BRED ITALIAN QUEENS

The Strain that Leading Honey Producers Prefer

1 to 24	25 to 99	100 up
$1.00 each	85c each	75c each

None better regardless of price

York Bee Co.

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Healthy Italian Bees & Queens

Write for 1952 Prices

Georgia Bee & Honey Apiaries

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KOEHNEN'S

Package Bees and Queens

For Quality and Service

KOEHNEN'S APIARIES

GLENN, CALIFORNIA

A TALK TO BEGINNERS

(Continued from page 734)

in shallow frame supers throughout, using the shallow frames for brood chambers as well as supers. Certainly the shallow supers are more easily lifted than the deep ones. The time was when I enjoyed swinging those deep supers filled with honey from the hive on to the truck to take in to be extracted. Those days are over for me and I prefer the shallow supers when it comes to lifting them around.

There is one objection I have to shallow supers for a brood chamber and that is, one has to handle more combs when examining a brood chamber than would be necessary when using standard or jumbo frames.

The first time I saw the shallow super used for brood chambers was by Peter Sowinski, who kept bees at Bellaire, Michigan, 1917. I spent a couple of seasons south of Traverse City, in the raspberry region and early in the fall of 1917, I made a trip to see Mr. Sowinski. At that time he had about 300 or 400 hives of bees and was wintering them in cellars. He used 8-frame equipment and had each colony occupy three 8-frame shallow supers for cellar wintering.

At that time I was operating bees in 8-frame standard hives because they were the hives the bees occupied when I bought them from a comb honey producer in Michigan. That fall I fixed up a cellar under a dwelling house to put my bees into. I had between 200 and 300 colonies and did not think it safe to winter them out of doors. So I put them all into this large cellar, fixed up some ventilators and put some thermometers inside the cellar and outside on the northeast corner of the house. The man who took care of the bees during the winter said that at one time the temperature at the corner of the house was 40° below and the temperature in the bee cellar was 40° above. In the future I may write more about my Michigan experiences.

LADYLIKE CAUCASIAN

Bees and queens for 1952. Prices available about January 1st. Book orders early to avoid disappointment.

Caucasian Apiaries

Castleberry, Ala.

KNIGHT'S

3-Banded Leather Colored Italian Bees and Queens
Prompt Service
Full Weight Packages
Young Laying Queens
Your Satisfaction Guaranteed
No Charge for Clipping

JOHN T. KNIGHT
HAYNEVILLE, ALA.

CAUCASIANS
CARNIOLANS

Wish you all a very Merry Christmas and a Happy and Prosperous New Year. Preparing to have Queens and some package bees by March 1st, 1952.

Albert G. Hann, La Belle, Florida

We are interested in Buying HONEY

Send sample and price

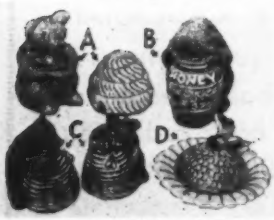
T. J. Paisley Co.
Medina, Ohio

Starline Sunkist Regular

We can now offer you those Starline queens in addition to our regular Italian Stock. Starline are bred for vigor, production, and resistance. One package or a truckload. It will pay you to write us your needs.

Sunkist Bee Company Convent, La.

Dandy Xmas Gifts



A. BEAR & HONEY skep salt and pepper. Finest pottery. $1.25 pr.; 3 prs., $2.95.
B. Bear in honey pot, paper weight or ornament, $1.15; 3 for $2.75.
C. Cubs with honey skeps. Salt and Pepper. Hard, glazed finish. $1.00 pr.; 3 prs., $2.40. 1 doz. prs., $6.75. D. Bee on sunflower. Flower separates forming salt and pepper. $1.25 set; 3 sets, $2.95, PREPAID.

TONTZ HONEY FARM
Dept. GC, Elsinore, Calif.

Please Write Us
About bees and queens for 1952
J. F. McVay
Jackson, Alabama

Good Italian Queens
in Season
White Pine Bee Farms
Rockton, Pa.

High Quality Italian Queens
by Air Mail
75c each
10 or more, 65c each.
Carlus T. Harper, New Brockton, Ala.

BRITISH BEE JOURNAL
The Only WEEKLY Bee Journal in the World
Subscription $3.00 per annum payable in advance.
Keep up to Date in Beekeeping by taking out a subscription now through our agents:
Gleanings in Bee Culture

JUST NEWS

(Continued from page 753)

combs cut to proper dimensions and put into the containers are likely to crystallize in a short time after the liquid honey is put in. Chunk honey should be sold during late summer and early fall.

Dr. H. R. Youse, of DuPaw University, gave an interesting talk on pollen plants in Indiana. He pointed out that large apiaries require adequate pollen sources, whereas, small yards of bees are more likely to secure needed pollen for brood rearing. Most bees have some pollen dusted on their bodies when they enter the hive. This pollen is cleaned off by hive bees which do the grooming. A considerable amount of pollen is collected in this way. There is nothing better than natural pollen for bees and ample pollen sources are essential in honey production.

G. H. Cale, of the American Bee Journal, in his talk on "Improving Bees Through Modern Methods of Queen Rearing", mentioned the artificial insemination of queens now used in scientific breeding to establish a strain of bees with desirable characteristics. As yet, comparatively little is known about bee breeding but some headway is being made in developing strains that possess characteristics that are desirable, such as longevity, hardiness in wintering, resistance to disease, and superiority in honey-gathering qualities.

Dr. B. Elwood Montgomery, of Purdue University, talked on bumble bees and had with him specimens of different kinds of bumble bees found in this section of the country, especially in Indiana. Dr. Montgomery recently spent part of a year in New Zealand where bumble bees were imported in 1885 in order to increase the pollination of red clover grown in that country.

Gilbert Perigo, Chief Inspector of Apiaries in Indiana, reported progress being made in disease control. The percentage of disease throughout Indiana in 1950 was 6.6 percent. This has been reduced to 2 percent in 1951.

Officers for the coming year are: Truman Young, Boonville, President; Earl Alexander, Richmond, Vice President; and Gilbert Perigo, Indianapolis, Sec'y.-Treas.

Directors: Ross B. Scott La Grange; Chester E. Shepherd, Brownstown; D. G. Rutherford, Lafayette; W. H. Starrett, Indianapolis.

A ladies' auxilliary was formed, and its officers are: Pres., Mrs. Eloise Young, Boonville; Vice-Pres., Mrs. Chas. Green, Ft. Wayne; Sec., Mrs Elizabeth Perigo, Mooresville.—M. J. Deyell.

Our Cover Page

Our cover picture was taken by Paul Hadley of Philadelphia, Pa., last spring after an ice storm. The icicles on the leaves of the bush look like inverted candles so seem very appropriate for a Christmas cover.

PACKAGE BEES 1952—

We have enjoyed large demands the past season for our Fine Dadant's Starline Hybrid queens and our popular Three-Banded Italians.

We solicit continued and further business.

Let us book your 1952 package and queen orders now and watch this space for prices in later issues.

Season's Greetings—

Garon Bee Company **Donaldsonville, La.**

GO GULF BREEZE DURING 1952

We appreciate your orders no matter how large or small. One package, queen or a truck load always receives our best attention. WRITE US NOW about your needs.

Bessonet Bee Company **Donaldsonville, La.**

BEES and QUEENS

1952

W. E. PLANT

Hattiesburg, Rt. 2, Miss.

1876 1951

Our 1951 crop of Michigan clover honey should be ready for the market in July. Dealer: if you want clover honey of the best quality, get on our mailing list, and we will keep you advised on crop conditions, and prices for the coming season.

Address E. D. Townsend & Sons, Northstar, Michigan. The BEST known name in HONEY PRODUCTION.

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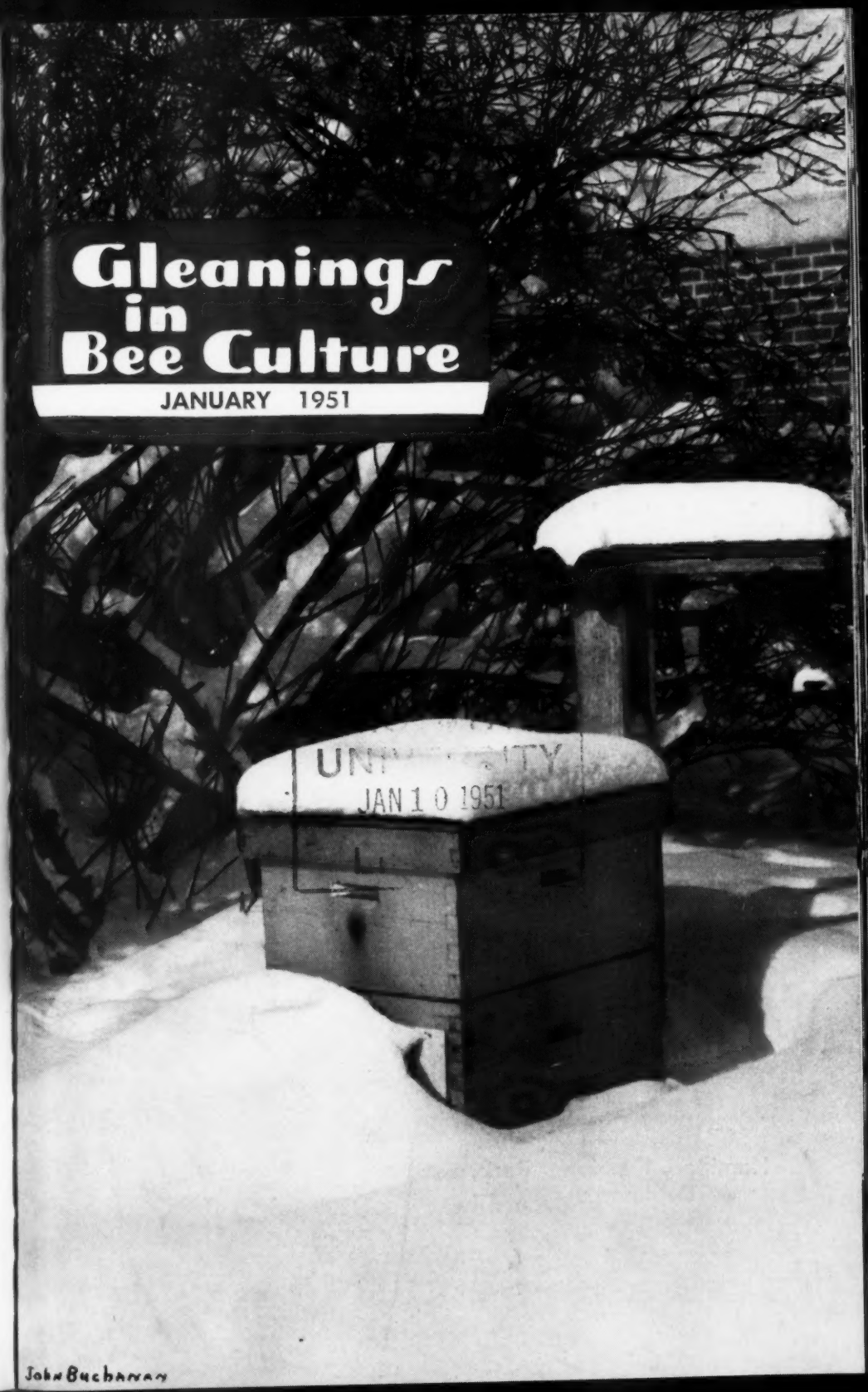

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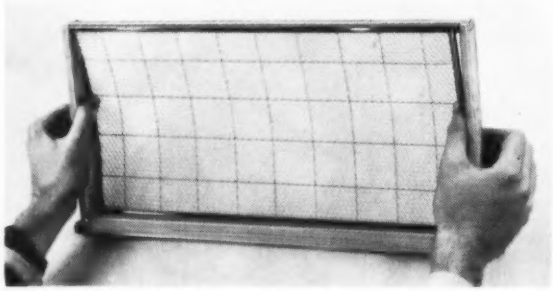
DADANT'S BEE COMB FOUNDATIONS



Gilt Edge

Thirty second assembly. All wired — metal bound — easy to use. In Lewis Nailless Topbar Frame goes in with unbelievable speed. Take it from us, it's modern magic.

Crimp-Wired

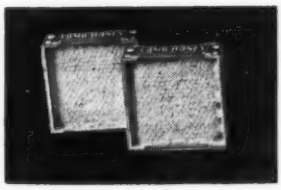
Old standby, with crimped wires and top wedge hooks to hold heavy loads and give all worker comb that turns out lots of bees. Gives you lifetime combs same as Gilt Edge. Used by thousands since 1921.

Plain Brood

Made for folks who like to wire their own foundation. Made by skilled operators. Carefully sorted. Tissue packed. Every sheet equal to the best we have ever made.

Premium Surplus

For both section comb honey and bulk comb honey. Becomes a delicate part of the finished honey. Always gives you a quality product. Absolutely pure, light-colored beeswax.



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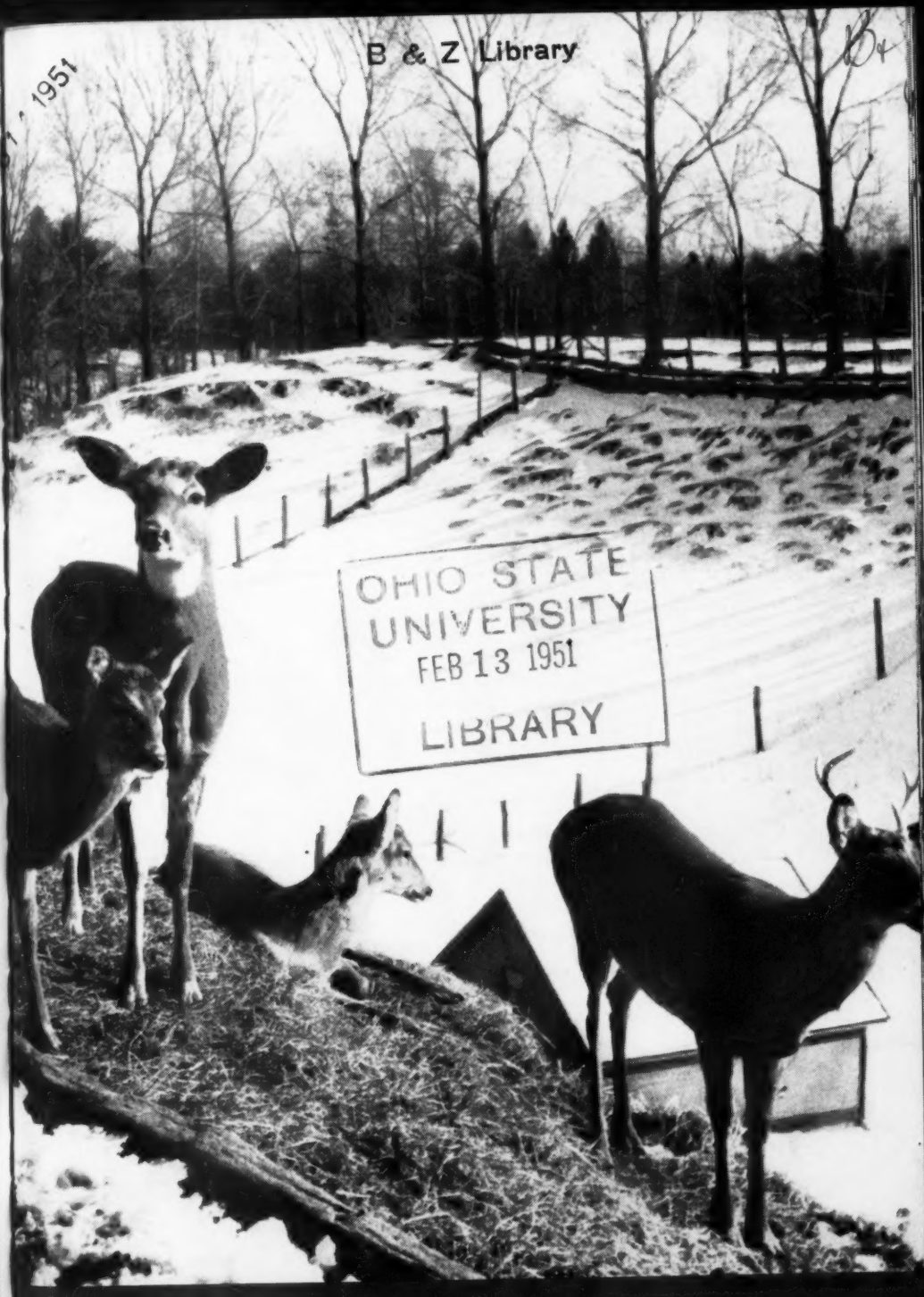

Gleanings in Bee Culture

February — 1951

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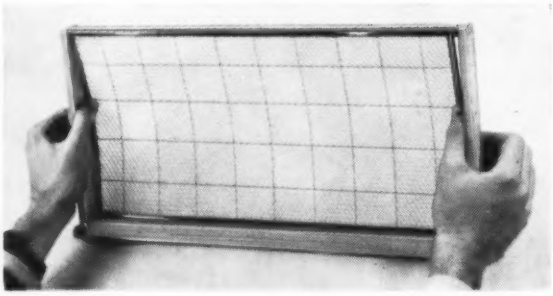

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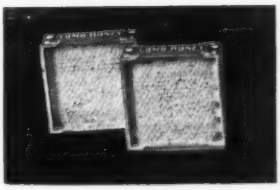
For both section comb honey and bulk comb honey. Becomes a delicate part of the finished honey. Always gives you a quality product. Absolutely pure, light-colored beeswax.



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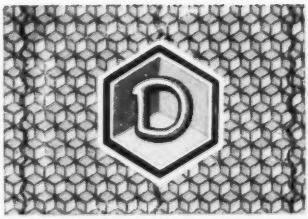

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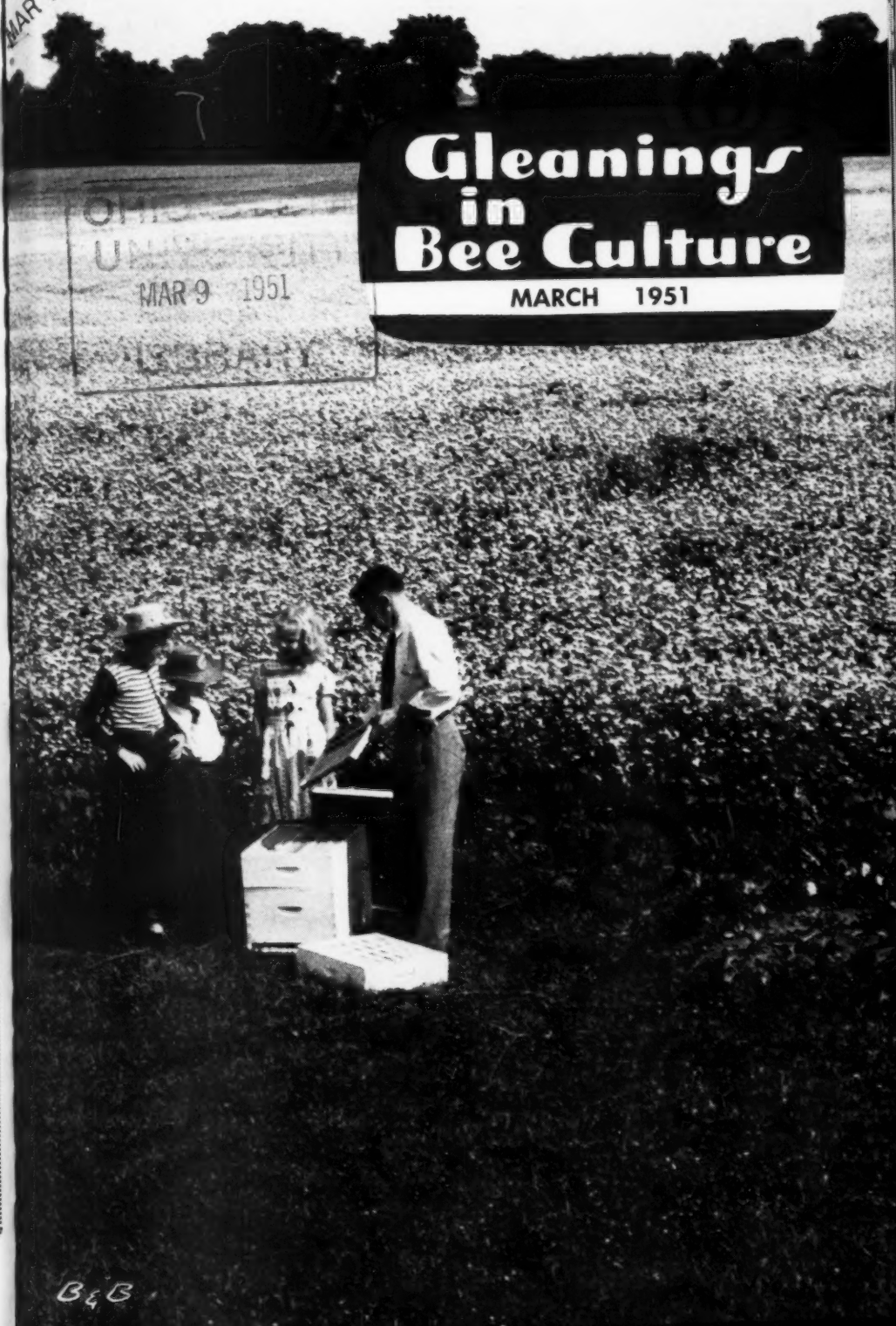

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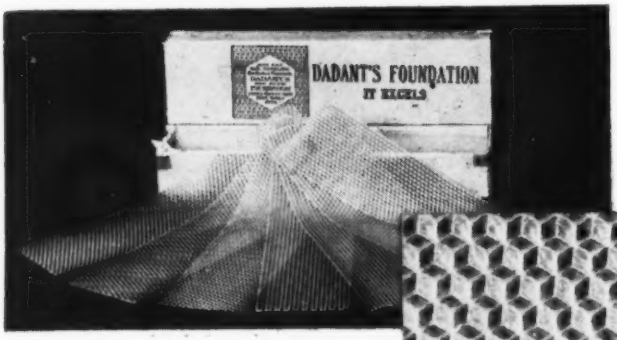

Clear as a Bell

Quality comb honey, built on Dadant's Surplus Foundation, sounds right out at the customer, clear as a bell, "Buy me."

Killion's prize winning section comb honey in Illinois (on Dadant's Surplus Foundation) has won top markets for many years.

* * * * *

And don't forget, when you want fine brood combs, use:

Dadant's Plain (unwired) Foundation for hand wiring.

Dadant's Crimp-wired Foundation

Dadant's Gilt Edge Foundation (Speed Magic)

Send for your copy of the new Lewis-Dadant Catalog for 1951

DADANT & SONS, INC.

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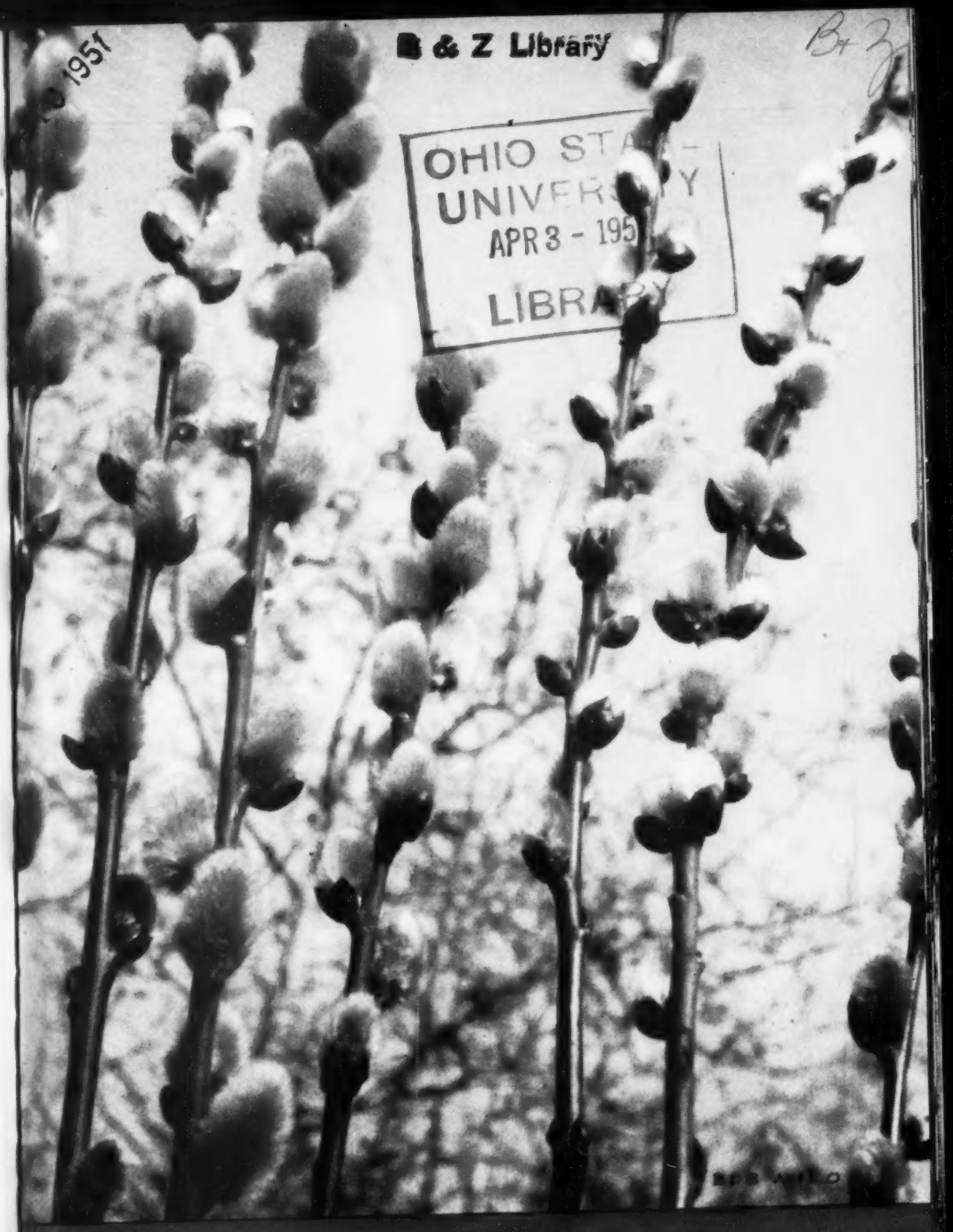

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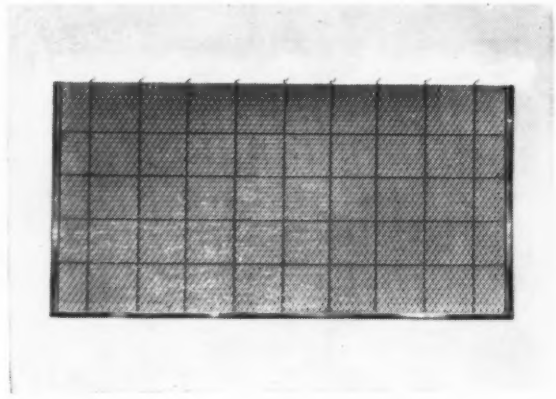
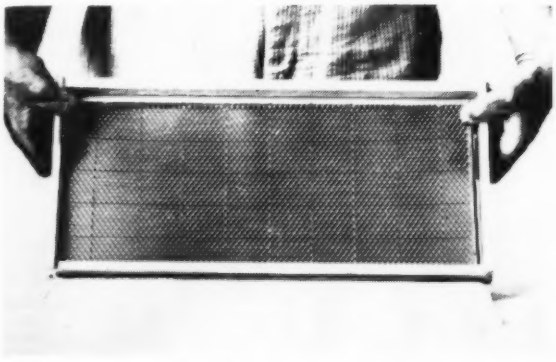
Dadant's Gilt-3-Edge Foundation





With two metal edges at the sides and one along the bottom of each sheet, and with the familiar crimped-wire hooks along the top edge. The vertical wires are also crimped and the cross wires are smooth. You have no wiring or embedding to do. Slip the bottom edge into the slot of the frame bottombar, lay the top edge with the hooks in the wedge space and nail in the wedge. It is fast and sure. And you will get combs that will last a lifetime; combs with a maximum of worker cells and sturdy enough for heavy honey storage; sturdy enough for radial extracting or for hauling about; the kind of combs you need for today's beekeeping.

Also Dadant's Gilt-4-Edge Foundation for Lewis Nailless Topbar Frames — Dadant's Crimp-Wired Foundation — Plain Brood — Surplus for Bulk and Section Honey. There is a Dadant Bee Comb Foundation for all your needs.

Send for your copy of the new Lewis-Dadant Bee Supply Catalog for 1951. There is a Dadant Dealer near you, wherever you may live.

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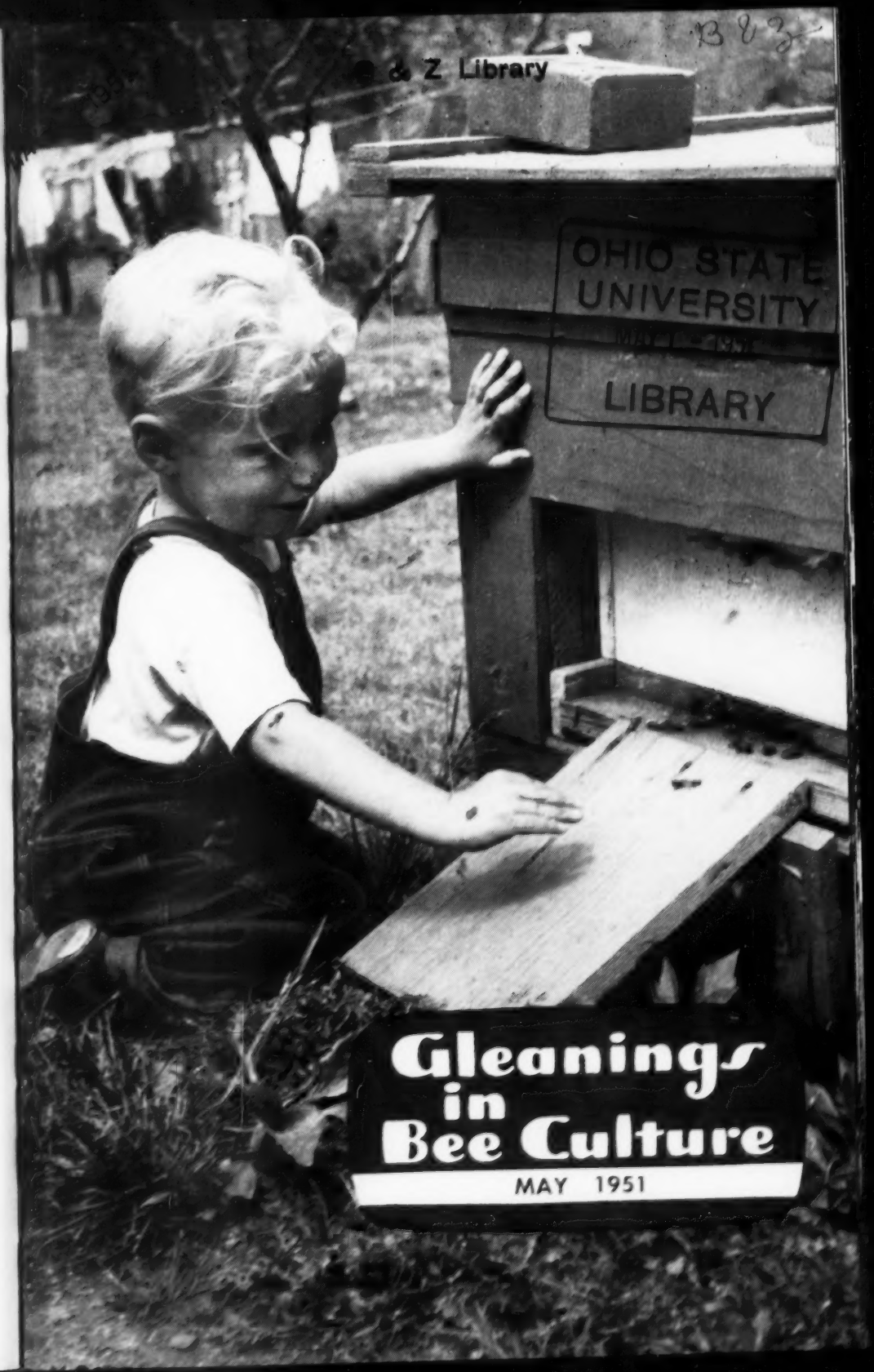

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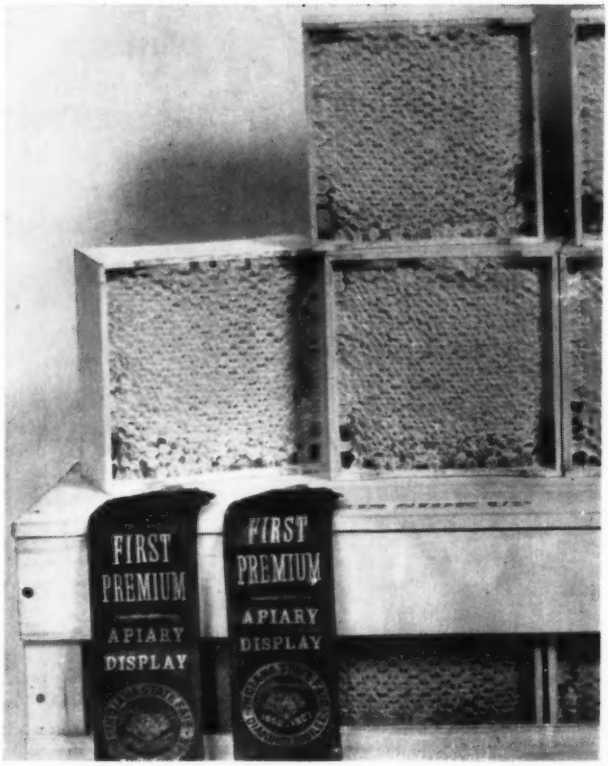

You Must Have a Finely Made Foundation

For Fine Quality Bulk Comb Honey or Section Comb Honey

Dadant's Supreme Super Foundation will give you top quality bulk comb honey or section comb honey. It is made of light-colored capping wax, with a fragrant odor; each sheet dainty, clear, and delightful. If you want top grades in cut comb, wrapped in cartons or packed in glass; or if you want fancy section comb honey, use Dadant's Super Foundation.

BEESWAX — We pay the highest prices for your beeswax. Ask for our latest prices and terms. Our rendering department will usually get more wax from your combs and cappings than you can get for yourself.

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Hamilton, Illinois —— Paris, Texas

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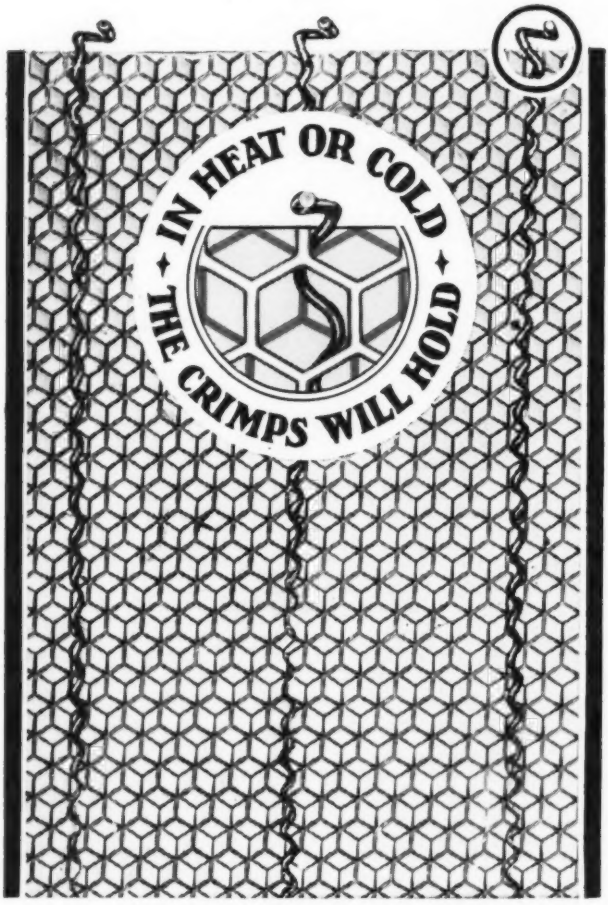

Dadant's Regular Crimp-Wired Foundation

Gives You The Least Expensive Combs You Can Get

Dadant's Crimp-Wired Foundation, as well as Dadant's Gilt-Edge Foundation, is a real investment and the man who uses a common, cheaper kind pays for it in the penalty of poor combs. Combs in the brood nest that are unfit for brood are a source of loss you cannot afford. Extractors also run at high speeds today, and trucks must carry combs many miles. You must have combs that will stand this kind of beekeeping. With Dadant's Crimp-Wired Foundation or Dadant's Gilt Edge Foundation you can get the kind of combs you must have. Long after less sturdy combs have been discarded, your everlasting combs from these foundations will still be doing their part to reduce your costs. They are almost permanent equipment, paid back to you many times in bees and honey.

Also Dadant's Plain (unwired) Brood Foundation — Premium Super Foundation for quality Section and Bulk Comb Honey.

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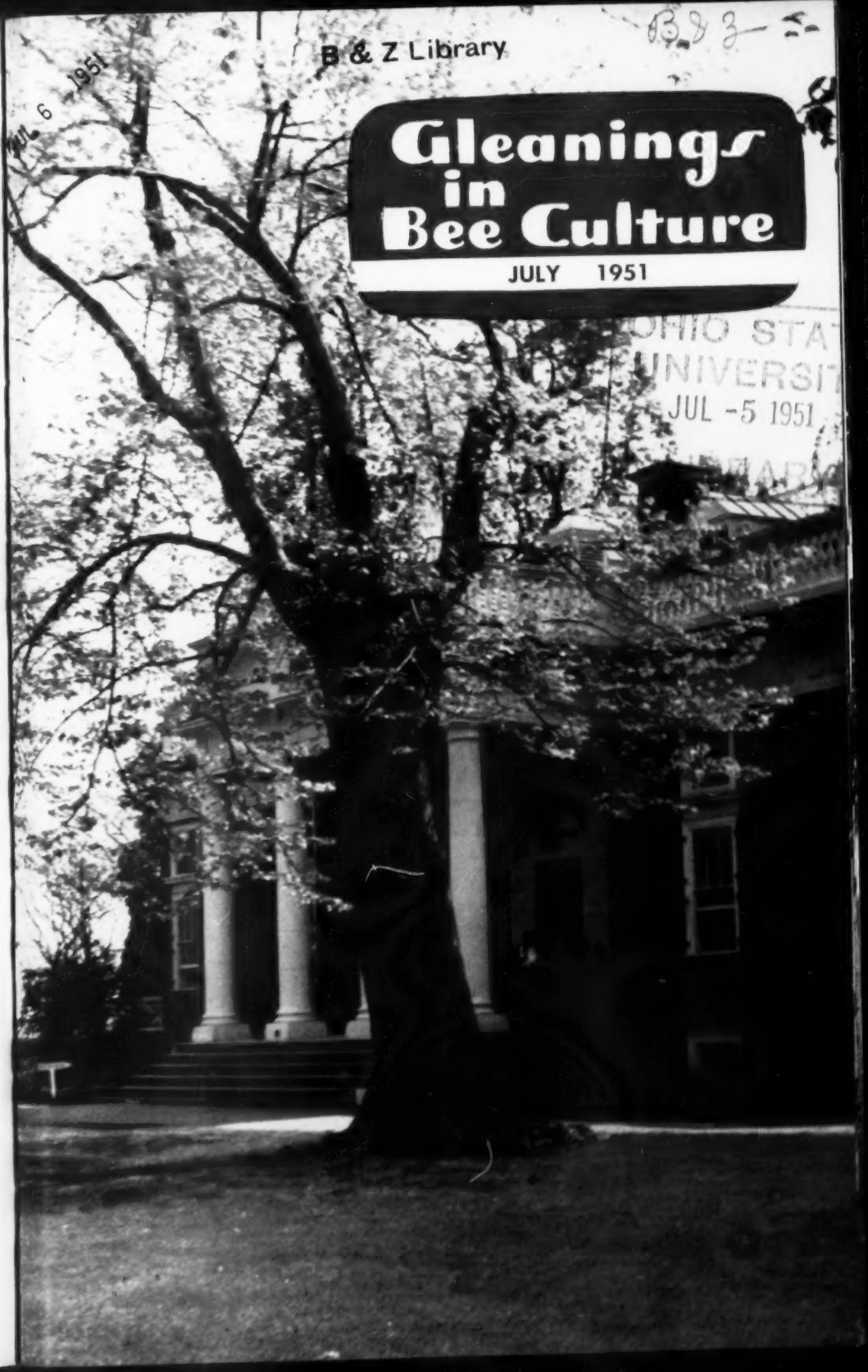

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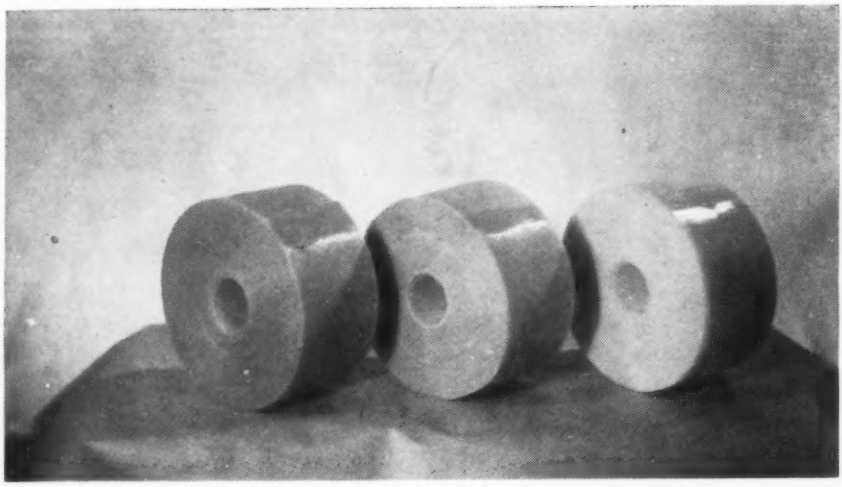

SELECTED

Fine, light colored, cleanest of clean, pure beeswax forms these rolls from which we make Dadant's Supreme Super Foundation for section comb honey and for the finest quality bulk comb honey for wrapping or packing with liquid honey in glass. This is the best market now for honey and Dadant's Supreme Super Foundation will help you pack a product of which you may be proud.

We also have newly designed cartons for your wrapped cut comb honey. Something that is real class. Glad to send you samples if you are interested.

Get your name on the list for our new Fall Price list which will soon be in the mails. Everything you need to pack and sell honey; all kinds of equipment for handling honey and for taking it off the bees.

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Gleanings in Bee Culture

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HONEY, dat's all!

The Eyes Have It

Yes sir, the eyes have it, when it comes to buying honey. When your jar, can, pail or section carries a Dadant honey label, you catch the buyer's eye at once. Just put good quality honey behind the label and the sale is well on the way. Dadant Labels are in many colors and styles to suit any package. Our catalog has all of them, each one just as you need it to paste right on your container and see how it looks. A copy of our label catalog with all styles and colors of labels is yours for the asking. Send for yours today.

Our new fall price list is about ready. Send your name and address for a copy. All kinds of containers and helps for selling honey. All kinds of equipment for handling honey from hive to store.

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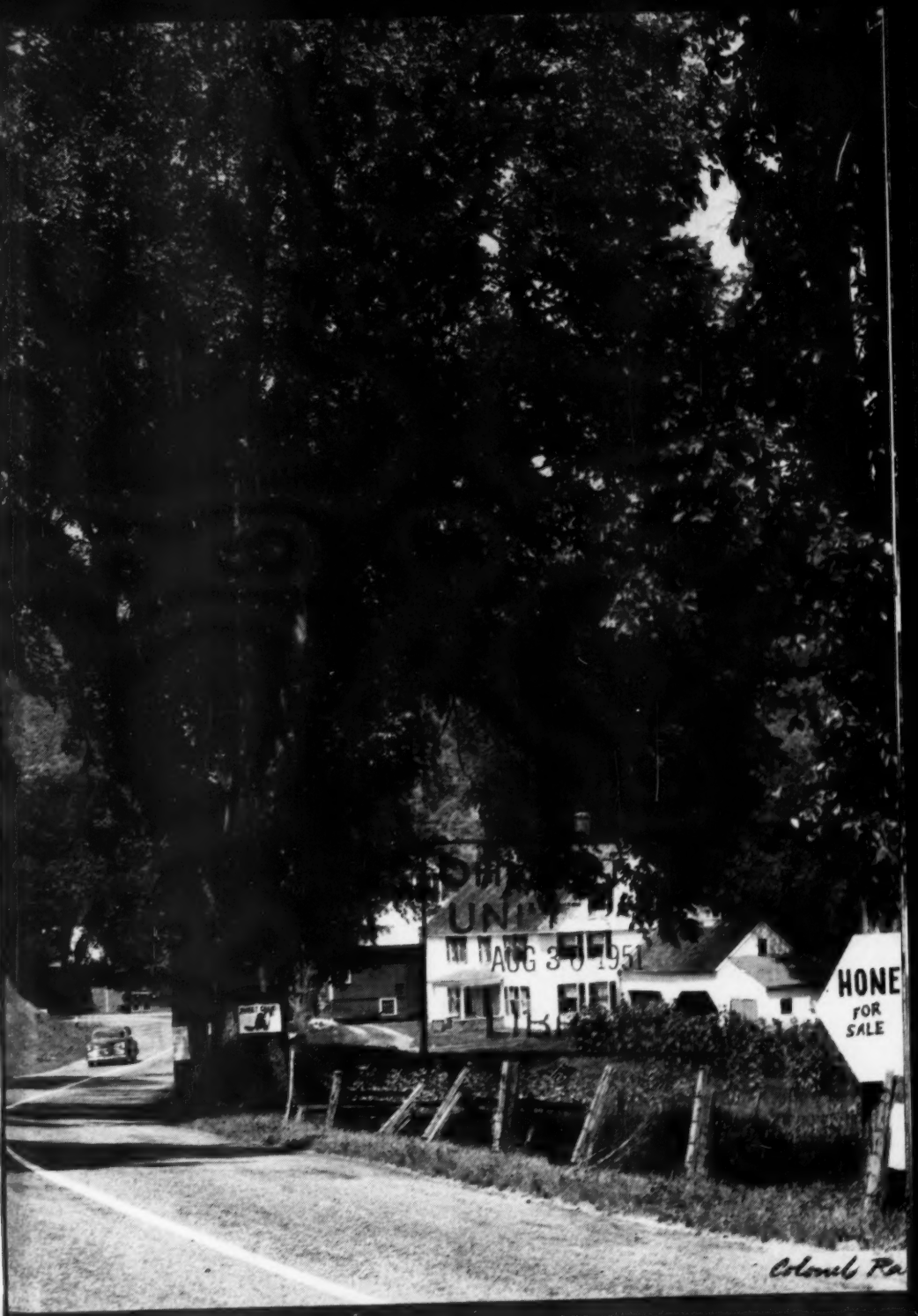

Gleanings in Bee Culture

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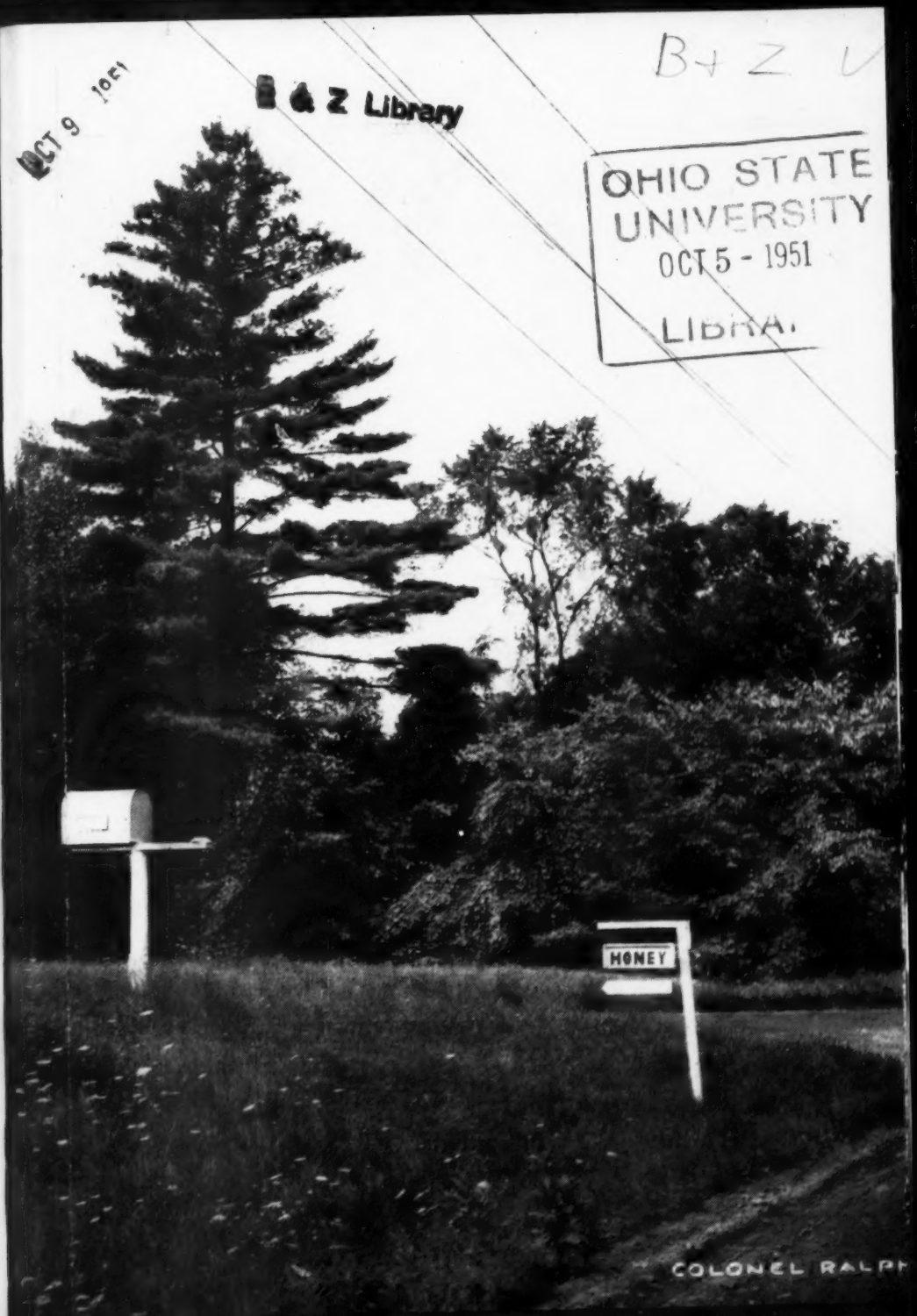

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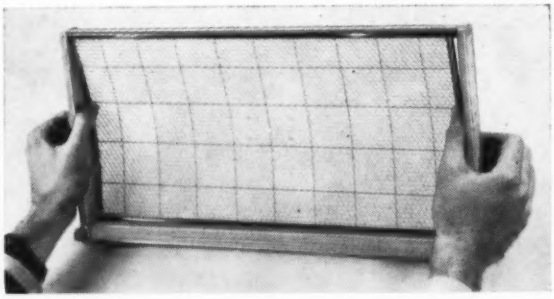
Good-by Bench Work!



Assemble frame and foundation in less than a minute with no wiring or embedding to do and only two nails to use.

The Lewis Nailless Topbar Frame has two self locking joints for joining sidebars and topbar. There is no wedge and only two nails to nail in through bored holes in the ends of the bottombar. A sheet of Dadant's Gilt Edge Foundation slips quickly into the frame without wiring or embedding. You can set up the frame and foundation, ready to use, in less than a minute. It is modern magic.

REMEMBER ALSO * Dadant's Crimp-wired Foundation (the only kind with the top hooks) for inexpensive, everlasting combs.
Dadant's Supreme Super Foundation for quality comb honey (section or bulk).
Dadant's Plain (unwired) Foundation for your own special methods.

ALL DADANT'S BEE COMB FOUNDATIONS ARE MADE OF PURE BEESWAX.

Dadant & Sons, Inc., Hamilton, Ill. . . . . Paris, Texas.
G. B. Lewis Co., Watertown, Wis. . . Albany, New York . . Lynchburg, Va. . . Chillicothe, Ohio.

BEESWAX— For a steady market for your beeswax at good prices try Dadant & Sons. Send for terms and shipping instructions for cash or trade.

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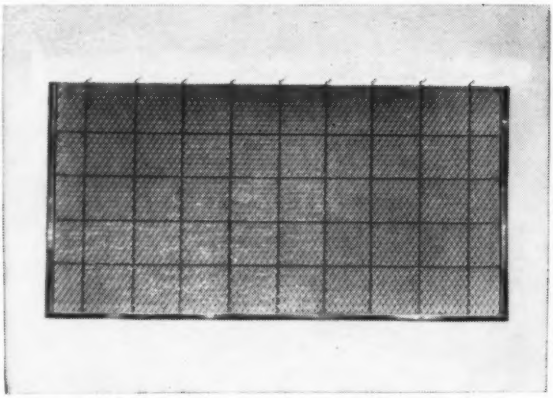
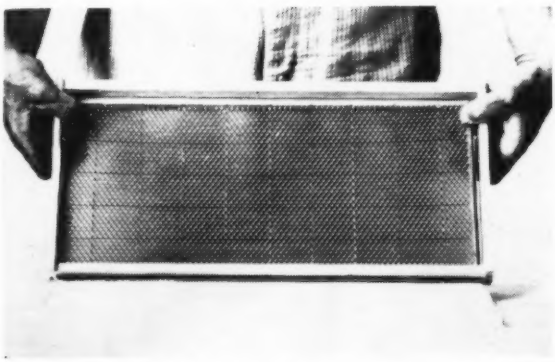
Dadant's Gilt-3-Edge Foundation





With two metal edges at the sides and one along the bottom of each sheet, and with the familiar crimped-wire hooks along the top edge. The vertical wires are also crimped and the cross wires are smooth. You have no wiring or embedding to do. Slip the bottom edge into the slot of the frame bottombar, lay the top edge with the hooks in the wedge space and nail in the wedge. It is fast and sure. And you will get combs that will last a lifetime; combs with a maximum of worker cells and sturdy enough for heavy honey storage; sturdy enough for radial extracting or for hauling about; the kind of combs you need for today's beekeeping.

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All Dadant's Foundations Are Made Of Pure Beeswax

Dadant & Sons, Inc.

Hamilton, Illinois — — Paris, Texas

BEESWAX—For a steady market for your beeswax at good prices try Dadant & Sons. Send for terms and shipping instructions, for cash or trade.

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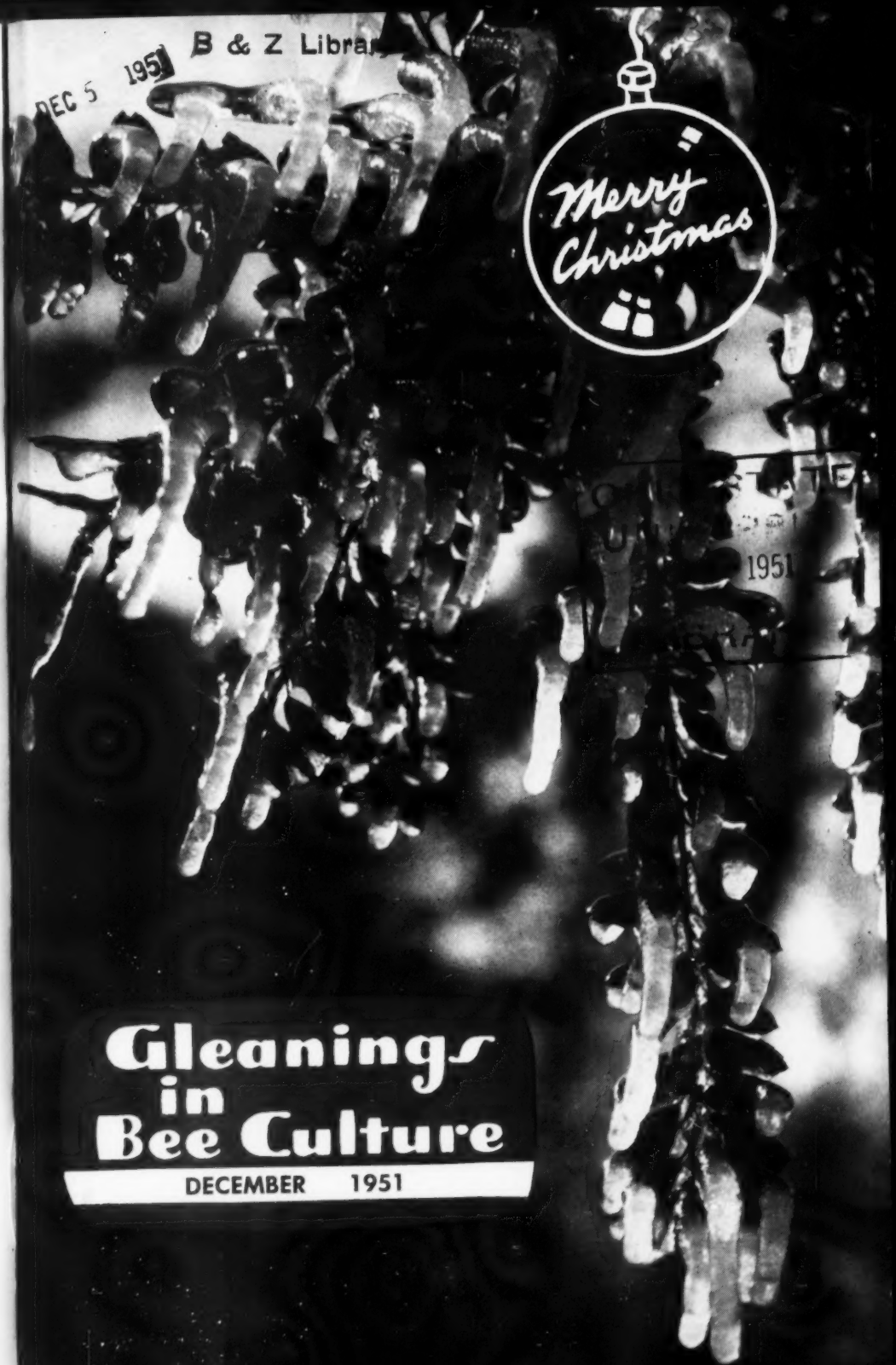

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What Better Gift for Christmas than a Book about Bees to a Bee-keeping Friend?

The Hive and the Honey Bee

650 big pages, with over 300 pictures —a really big book; sturdy cloth binding. Packed with how-to-do-it items; studies about the anatomy and physiology of the bee; how the bee works and behaves; the latest about diseases; marketing; honey plants. Each author an authority in his subject. Second (revised) edition.

Price .....**$4.00** postpaid

Queen Rearing

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